

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau(43) International Publication Date  
2 August 2001 (02.08.2001)

PCT

(10) International Publication Number  
WO 01/55320 A2

(51) International Patent Classification <sup>7</sup> :	C12N	60/226,868	22 August 2000 (22.08.2000)	US	
		60/227,182	22 August 2000 (22.08.2000)	US	
(21) International Application Number:	PCT/US01/01339	60/226,681	22 August 2000 (22.08.2000)	US	
		60/227,009	23 August 2000 (23.08.2000)	US	
(22) International Filing Date:	17 January 2001 (17.01.2001)	60/228,924	30 August 2000 (30.08.2000)	US	
		60/229,344	1 September 2000 (01.09.2000)	US	
(25) Filing Language:	English	60/229,343	1 September 2000 (01.09.2000)	US	
		60/229,287	1 September 2000 (01.09.2000)	US	
(26) Publication Language:	English	60/229,345	1 September 2000 (01.09.2000)	US	
		60/229,513	5 September 2000 (05.09.2000)	US	
(30) Priority Data:		60/229,509	5 September 2000 (05.09.2000)	US	
60/179,065	31 January 2000 (31.01.2000)	US	60/230,438	6 September 2000 (06.09.2000)	US
60/180,628	4 February 2000 (04.02.2000)	US	60/230,437	6 September 2000 (06.09.2000)	US
60/184,664	24 February 2000 (24.02.2000)	US	60/231,413	8 September 2000 (08.09.2000)	US
60/186,350	2 March 2000 (02.03.2000)	US	60/232,080	8 September 2000 (08.09.2000)	US
60/189,874	16 March 2000 (16.03.2000)	US	60/231,414	8 September 2000 (08.09.2000)	US
60/190,076	17 March 2000 (17.03.2000)	US	60/231,244	8 September 2000 (08.09.2000)	US
60/198,123	18 April 2000 (18.04.2000)	US	60/232,081	8 September 2000 (08.09.2000)	US
60/205,515	19 May 2000 (19.05.2000)	US	60/231,242	8 September 2000 (08.09.2000)	US
60/209,467	7 June 2000 (07.06.2000)	US	60/231,243	8 September 2000 (08.09.2000)	US
60/214,886	28 June 2000 (28.06.2000)	US	60/231,968	12 September 2000 (12.09.2000)	US
60/215,135	30 June 2000 (30.06.2000)	US	60/232,401	14 September 2000 (14.09.2000)	US
60/216,647	7 July 2000 (07.07.2000)	US	60/232,399	14 September 2000 (14.09.2000)	US
60/216,880	7 July 2000 (07.07.2000)	US	60/232,400	14 September 2000 (14.09.2000)	US
60/217,487	11 July 2000 (11.07.2000)	US	60/232,397	14 September 2000 (14.09.2000)	US
60/217,496	11 July 2000 (11.07.2000)	US	60/233,063	14 September 2000 (14.09.2000)	US
60/218,290	14 July 2000 (14.07.2000)	US	60/233,064	14 September 2000 (14.09.2000)	US
60/220,963	26 July 2000 (26.07.2000)	US	60/233,065	14 September 2000 (14.09.2000)	US
60/220,964	26 July 2000 (26.07.2000)	US	60/232,398	14 September 2000 (14.09.2000)	US
60/225,757	14 August 2000 (14.08.2000)	US	60/234,223	21 September 2000 (21.09.2000)	US
60/225,270	14 August 2000 (14.08.2000)	US	60/234,274	21 September 2000 (21.09.2000)	US
60/225,447	14 August 2000 (14.08.2000)	US	60/234,997	25 September 2000 (25.09.2000)	US
60/225,267	14 August 2000 (14.08.2000)	US	60/234,998	25 September 2000 (25.09.2000)	US
60/225,758	14 August 2000 (14.08.2000)	US	60/235,484	26 September 2000 (26.09.2000)	US
60/225,268	14 August 2000 (14.08.2000)	US	60/235,834	27 September 2000 (27.09.2000)	US
60/224,518	14 August 2000 (14.08.2000)	US	60/235,836	27 September 2000 (27.09.2000)	US
60/224,519	14 August 2000 (14.08.2000)	US	60/236,369	29 September 2000 (29.09.2000)	US
60/225,759	14 August 2000 (14.08.2000)	US	60/236,327	29 September 2000 (29.09.2000)	US
60/225,213	14 August 2000 (14.08.2000)	US	60/236,370	29 September 2000 (29.09.2000)	US
60/225,266	14 August 2000 (14.08.2000)	US	60/236,368	29 September 2000 (29.09.2000)	US
60/225,214	14 August 2000 (14.08.2000)	US	60/236,367	29 September 2000 (29.09.2000)	US
60/226,279	18 August 2000 (18.08.2000)	US			

[Continued on next page]

(54) Title: NUCLEIC ACIDS, PROTEINS, AND ANTIBODIES

(57) Abstract: The present invention relates to novel reproductive system related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "reproductive system related antigens", and the use of such reproductive system related antigens for detecting disorders of the reproductive system, particularly the presence of cancers and cancer metastases. More specifically, isolated reproductive system associated nucleic acid molecules are provided encoding novel reproductive system associated polypeptides. Novel reproductive system related polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human reproductive system associated polynucleotides and/or polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the reproductive system, including reproductive system cancers, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting the production and function of the polypeptides of the present invention.

WO 01/55320 A2



60/237,039	2 October 2000 (02.10.2000)	US	60/251,030	5 December 2000 (05.12.2000)	US
60/237,038	2 October 2000 (02.10.2000)	US	60/251,988	5 December 2000 (05.12.2000)	US
60/237,040	2 October 2000 (02.10.2000)	US	60/251,479	6 December 2000 (06.12.2000)	US
60/237,037	2 October 2000 (02.10.2000)	US	60/251,869	8 December 2000 (08.12.2000)	US
60/236,802	2 October 2000 (02.10.2000)	US	60/251,856	8 December 2000 (08.12.2000)	US
60/239,937	13 October 2000 (13.10.2000)	US	60/251,868	8 December 2000 (08.12.2000)	US
60/239,935	13 October 2000 (13.10.2000)	US	60/251,990	8 December 2000 (08.12.2000)	US
60/241,785	20 October 2000 (20.10.2000)	US	60/251,989	8 December 2000 (08.12.2000)	US
60/241,809	20 October 2000 (20.10.2000)	US	60/254,097	11 December 2000 (11.12.2000)	US
60/240,960	20 October 2000 (20.10.2000)	US	60/259,678	5 January 2001 (05.01.2001)	US
60/241,787	20 October 2000 (20.10.2000)	US			
60/241,808	20 October 2000 (20.10.2000)	US	(71) Applicant (for all designated States except US):		
60/241,221	20 October 2000 (20.10.2000)	US	<b>HUMAN GENOME SCIENCES, INC.</b> [US/US]; 9410 Key West Avenue, Rockville, MD 20850 (US).		
60/241,786	20 October 2000 (20.10.2000)	US			
60/241,826	20 October 2000 (20.10.2000)	US	(72) Inventors; and		
60/244,617	1 November 2000 (01.11.2000)	US	(75) Inventors/Applicants (for US only):		
60/246,474	8 November 2000 (08.11.2000)	US	<b>ROSEN, Craig, A.</b> [US/US]; 22400 Rolling Hill Lane, Laytonsville, MD 20882 (US). <b>BARASH, Steven, C.</b> [US/US]; 111 Watkins Pond Boulevard #301, Rockville, MD 20850 (US). <b>RUBEN, Steven, M.</b> [US/US]; 18528 Heritage Hills Drive, Olney, MD 20832 (US).		
60/246,532	8 November 2000 (08.11.2000)	US			
60/246,476	8 November 2000 (08.11.2000)	US	(74) Agents: <b>HOOVER, Kenley, K.</b> et al.; Human Genome Sciences, Inc., 9410 Key West Avenue, Rockville, MD 20850 (US).		
60/246,526	8 November 2000 (08.11.2000)	US			
60/246,475	8 November 2000 (08.11.2000)	US	(81) Designated States (national):		
60/246,525	8 November 2000 (08.11.2000)	US	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.		
60/246,528	8 November 2000 (08.11.2000)	US			
60/246,527	8 November 2000 (08.11.2000)	US	(84) Designated States (regional):		
60/246,477	8 November 2000 (08.11.2000)	US	ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).		
60/246,611	8 November 2000 (08.11.2000)	US			
60/246,610	8 November 2000 (08.11.2000)	US			
60/246,613	8 November 2000 (08.11.2000)	US			
60/246,609	8 November 2000 (08.11.2000)	US			
60/246,478	8 November 2000 (08.11.2000)	US			
60/246,524	8 November 2000 (08.11.2000)	US			
60/246,523	8 November 2000 (08.11.2000)	US			
60/249,299	17 November 2000 (17.11.2000)	US			
60/249,210	17 November 2000 (17.11.2000)	US			
60/249,216	17 November 2000 (17.11.2000)	US			
60/249,217	17 November 2000 (17.11.2000)	US			
60/249,211	17 November 2000 (17.11.2000)	US			
60/249,215	17 November 2000 (17.11.2000)	US			
60/249,218	17 November 2000 (17.11.2000)	US			
60/249,208	17 November 2000 (17.11.2000)	US			
60/249,213	17 November 2000 (17.11.2000)	US			
60/249,212	17 November 2000 (17.11.2000)	US			
60/249,207	17 November 2000 (17.11.2000)	US			
60/249,245	17 November 2000 (17.11.2000)	US			
60/249,244	17 November 2000 (17.11.2000)	US			
60/249,297	17 November 2000 (17.11.2000)	US			
60/249,214	17 November 2000 (17.11.2000)	US			
60/249,264	17 November 2000 (17.11.2000)	US			
60/249,209	17 November 2000 (17.11.2000)	US			
60/249,300	17 November 2000 (17.11.2000)	US			
60/249,265	17 November 2000 (17.11.2000)	US			
60/250,391	1 December 2000 (01.12.2000)	US			
60/250,160	1 December 2000 (01.12.2000)	US			
60/256,719	5 December 2000 (05.12.2000)	US			

## Published:

- without international search report and to be republished upon receipt of that report
- entirely in electronic form (except for this front page) and available upon request from the International Bureau

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

## **Nucleic Acids, Proteins, and Antibodies**

[001] This application refers to a "Sequence Listing" that is provided only on electronic media in computer readable form pursuant to Administrative Instructions Section 801(a)(i). The Sequence Listing forms a part of this description pursuant to Rule 5.2 and Administrative Instructions Sections 801 to 806, and is hereby incorporated in its entirety.

[002] The Sequence Listing is provided as an electronic file (PC006PCT\_seqList.txt, 20,399,961 bytes in size, created on January 12, 2001) on four identical compact discs (CD-R), labeled "COPY 1," "COPY 2," "COPY 3," and "CRF." The Sequence Listing complies with Annex C of the Administrative Instructions, and may be viewed, for example, on an IBM-PC machine running the MS-Windows operating system by using the V viewer software, version 2000 (see World Wide Web URL: <http://www.fileviewer.com>).

### ***Field of the Invention***

[003] The present invention relates to novel reproductive system related polynucleotides, the polypeptides encoded by these polynucleotides herein collectively referred to as "reproductive system antigens," and antibodies that immunospecifically bind these polypeptides, and the use of such reproductive system polynucleotides, antigens, and antibodies for detecting, treating, preventing and/or prognosing disorders of the reproductive system, including, but not limited to, the presence of cancer and cancer metastases. More specifically, isolated reproductive system nucleic acid molecules are provided encoding novel reproductive system polypeptides. Novel

reproductive system polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human reproductive system polynucleotides, polypeptides, and/or antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the reproductive system, including cancers of the reproductive system, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The invention further relates to methods and/or compositions for inhibiting or promoting the production and/or function of the polypeptides of the invention.

### ***Background of the Invention***

[004] The human reproductive system enables continuation of the species. Human beings reproduce sexually, require the involvement of both a male and a female. Reproduction involves the coalition of sex cells. A new human being begins its development after a sex cell (sperm), created by the male unites with a sex cell (ovum) created by the female. Both the male and female reproductive systems function through the complex interaction of several organs. Diseases or malfunctions of these organs can impair reproduction or cause infertility.

#### ***The Male Reproductive System***

[005] Male reproductive functions can be divided into three major subdivisions; spermatogenesis (the formation and maturation of sperm), performance of the male sexual act (arousal, erection, and ejaculation), and regulation of male sexual functions by the various hormones (mainly testosterone). Associated with these reproductive functions are the effects of the male sex hormones on the accessory sexual organs, cellular metabolism, growth, and on several other bodily functions. The onset of sexual maturation and these reproductive functions in males occurs at puberty, which, in humans, typically begins around age thirteen.

[006] The male reproductive system is composed of the testes, a pair of organs contained in the scrotum which include the seminiferous tubules and epididymus;



secretory glands, such as the prostate gland, seminal vesicles, bulbourethral glands, and urethral glands; tubular passageways, such as the vas deferens and urethra; and the penis, which functions in performance of the sexual act and sperm transmission.

[007] Common disorders of the male reproductive system include infections, cancers, and inflammations of the above listed components, which are described in greater detail below.

#### *Disorders of the Testes*

[008] The two primary functions of the testes are 1) production of testosterone and 2) production of sperm. Testosterone produced in the testes is released into the blood stream, where it travels to and acts on a wide range of tissues and organs within the male body. Disorders resulting from testosterone deficiency are manifested in the male reproductive system typically by symptoms of hypogonadism, which is the failure to go through puberty. Specifically, erectile function is impaired, and libido and sperm production are decreased or absent.

[009] Known dysfunctions of sperm production include aspermia (the failure to produce an ejaculate), asthenospermia (the production of an ejaculate in which less than 50% of spermatozoa are motile), azoospermia (the production of an ejaculate devoid of spermatozoa), oligospermia (production of an ejaculate containing less than 20x100 spermatozoa per milliliter of semen), and teratospermia (the production of an ejaculate in which more than 50% of the spermatozoa are of abnormal shape), all of which result in impaired fertility. Improper sperm formation may result from a variety of factors, including congenital defects, genetic abnormalities, injury, and infection. For example, contraction of the mumps virus early in male adolescence can infect the testicles, leading to permanent complications in sperm production.

[010] Sperm formation may also be impaired by disorders of the epididymus, the labyrinthine tube system located in each testis where sperm mature. Common disorders include infections (e.g., *Neisseria gonorrhoea*, *Pseudomonas*, *Enterobacteriaceae*, and *Chlamydia trachomatis*), cyst formation or other obstructions, and enlargement of the spermatoceles (liquid filled cavities in the epididymus).

[011] During fetal development, the testes mature within the abdominal cavity and descend through the inguinal canal into the scrotum prior to birth. It is well known

that the testicles reside in the scrotum because it is cooler than other places within the body cavity, and even minor temperature differences can have a dramatic influence on the ability of the testicle to make sperm. An undescended testicle, sometimes called a cryptorchid testicle, is a fairly common problem in male babies. Typically, testicles undescended at birth will move into the scrotum within the first year of life, however in a small percentage of cases this migration does not occur. Early correction of this problem is crucial in preserving the fertility of the male, as the testicles begin to lose the ability to make sperm very early in life if they are not properly stored in the scrotum. Additionally, undescended testicles have a much higher rate of developing testicular cancer than testicles that descended spontaneously. Testicular cancer is the most common solid tumor in males aged 18 to 35. It typically is extremely aggressive and spreads early. A tumor of the testicle often shows itself by a fast enlargement of the testicle. Bringing the testes into the scrotum will allow for easier and more accurate examination of the testes, hopefully resulting in earlier detection of tumors. Further, undescended testicles are also associated with a greater risk of hernia.

[012] Disorders of the scrotal pouch commonly involve the small amount of fluid lining the pouch that allows for small movements and cushioning of the testicles. Several causes, such as testicular torsion, trauma, or tumors, may lead to an increase in the amount of liquid, causing the scrotal pouch to bulge. While this condition is harmless, it may cause irritation and discomfort if the bulge becomes too large.

[013] Another harmless, yet irritating disease of the testes is varicocele, a disorder of the small vein that runs the blood from the testicle back toward the heart. Small valves are present in these veins to prevent blood from flowing back toward the testicles. Sometimes, these valves malfunction, causing backflow and subsequent enlargement of the small vessel network in the scrotal sac. This gives rise to dull pain and an uncomfortable "bag of worms" feeling around the scrotum. There is currently considerable debate as to whether this phenomenon also contributes to decreased fertility.

#### *Disorders of the Vas Deferens and Seminal Vesicles*

[014] In the vas deferens, the sperm become mixed with a viscous, alkaline fluid from the seminal vesicles that constitutes 60% of semen. This fluid contains the

components for generating sperm motility and the enzymes necessary for fertilization of the egg within the female reproductive system. Disorders of the vas deferens and seminal vesicles are unusual, however a congenital defect where the vas deferens is absent is known to be associated with mutations in the CFTR gene, and a defect in seminal vesicle function is associated with the hydatid disease of the urogenital system.

#### *Disorders of the Prostate Gland*

[015] Disorders of the prostate gland are typically manifested by enlargement of the gland, leading to such symptoms as impaired urinary flow, infertility, and pain. For example, benign prostatic hyperplasia is the non-cancerous growth of the prostate gland, a condition that is fairly common in men over sixty. Prostate cancer, too, is extremely prevalent and is now the second most common type of cancer in males. Although men of any age can develop prostate cancer, it is found most frequently in men over age 50. Types of prostate cancers include, but not limited to, adenocarcinomas, transitional cell carcinomas, ductal carcinomas, and squamous cell carcinomas. The prostate is subject to infections or inflammation, which may also result in enlargement of the prostate, such as acute bacterial prostatitis, chronic bacterial prostatitis, and nonbacterial prostatitis.

#### *Disorders of the Penis and Urethra*

[016] During sexual activity, the penis becomes rigid and erect, enabling penetration and deposition of sperm. An erection results from complex interaction of neurologic, vascular, hormonal, and psychologic actions. Several types of infections and inflammatory disorders can effect the penis and its function. Balanoposthitis is a generalized inflammation of the head of the penis (glans penis) and foreskin, commonly caused by a yeast or bacterial infection beneath the foreskin of an uncircumcised penis. Symptoms include pain, itching, redness, and swelling and can ultimately lead to a narrowing (stricture) of the urethra. Other infectious and inflammatory disorders, such as balanitis xerotica obliterans (a hardening of the tip of the penis which ultimately blocks urine and semen flow), phimosis (the shrinking or tightening of the foreskin), paraphimosis (inability of the retracted foreskin to be

pulled back over the head of the penis), and Erythroplasia of Queyrat (an infection causing a clearly defined reddish, velvety area on the skin of the penis). If left untreated, many of these infections may become cancerous.

[017] Other infections can lead to penile growths, such as the small painless sores associated with syphilis, tiny blisters from the herpes simplex virus, firm nodules from genital warts, and dimpled growths (molluscum contagiosum) from an unknown virus. Small sores and growths are also associated with skin cancers (e.g., squamous cell carcinoma, Bowen's disease, and Paget's disease) that can occur anywhere on the penis.

[018] The causes of the two major erectile disorders are not well understood. Priapism is a painful, persistent erection unaccompanied by sexual desire or excitement. In most cases, priapism is believed to stem from habitual drug use, but it has also been associated with blood disorders (e.g., blood clots, leukemia, or sickle cell disease), tumors in the pelvis or spine, and infection of the genitals. Peyronie's disease is manifested as a fibrous thickening of tissue that causes the penis to develop contractures so that the shape of an erection is distorted. The curvature of the erect penis can make sexual penetration difficult or impossible and may make erections extremely painful. Current therapies include corticosteroid injections, ultrasound treatments, or, more commonly, surgery, which may lead to impotence.

[019] Impotence, or erectile dysfunction, is the consistent or recurrent inability to attain and maintain a penile erection rigid enough for satisfactory sexual intercourse. Erectile dysfunction relates only to the erectile capability of the penis, excluding problems of libido, ejaculation, and orgasm. It is now accepted that the majority of cases have a physical and not a psychogenic root. Physical causes include anatomic deformations (e.g., malformed genitalia or penile injury), diabetes mellitus, coronary disease, hypertension, atherosclerosis, high cholesterol levels, multiple sclerosis, stroke, lower spine diseases, and rectal or prostate surgery.

### *The Female Reproductive System*

[020] The female reproductive system is comprised of both external and internal organs. The external organs function in permitting sperm to enter the body and protecting the internal genital organs from infection and injury. The internal organs

form a pathway (the genital tract) for reproduction, beginning at the ovaries, through the fallopian tubes (oviducts) and uterus, to the birth canal (vagina).

[021] The sexual and reproductive functions in the female can be divided into two major phases: first, preparation of the body for conception, and second, the gestation and parturition. Gestation and parturition only occur if an ovum becomes fertilized. If fertilization does not occur, the reproductive system undergoes a cycle to ensure frequent readiness for conception and fertilization.

[022] Common disorders of the female reproductive system include infections, cancers, and inflammations of the organs, which are described in greater detail below.

#### *Disorders of the Uterus*

[023] Disorders of the uterus include absent bleeding (amenorrhea) and abnormal bleeding. Amenorrhea is normal only before puberty, during pregnancy, while breastfeeding, and after menopause. The absence of menses at other times is considered aberrant and may be indicative of problems in the brain, pituitary gland, thyroid gland, adrenal glands, ovaries, or virtually any other part of the reproductive tract. For example, the hypothalamus signals the pituitary gland to release hormones that cause the ovaries to release eggs. Inappropriately low levels of hypothalamic hormones prevent egg release, halting the menstrual cycle. The same is true for the thyroid and adrenal glands. To illustrate, in Cushing's syndrome, excess production of cortisol by the adrenal glands causes periods to be absent or irregular. The absence of periods can also be caused by growths (e.g., hydatidiform moles) or scarring of the uterine lining due to infection or surgery (e.g., Asherman's syndrome).

[024] Some women do not undergo puberty at all - consequently their periods never start. Causes include a birth defect in which the uterus or fallopian tubes develop abnormally and chromosomal disorders. For example, in Turner's syndrome, the female was formed from a zygote containing only one X chromosome and shows reproductive abnormalities, such as amenorrhea and chronically immature breasts, labia, vagina.

[025] Premature menopause is also a condition resulting in amenorrhea. Menopause is considered abnormal when it occurs in women under the age of forty. Causes of premature menopause include genetic (usually chromosomal) abnormalities and

autoimmune disorders in which antibodies damage the ovaries. Estrogen replacement therapy can prevent or reverse the symptoms of menopause, however the chance of conceiving a child remains less than ten percent.

[026] Uterine bleeding is considered abnormal when it is atypically heavy, light, frequent, or irregular. Moreover, bleeding before puberty or after menopause is almost always abnormal. Uterine polyps, fibroids (noncancerous growths of muscle and fibrous tissues), and cancers are common causes of abnormal uterine bleeding and usually can be surgically removed. Cancers of the uterus include adenocarcinomas (cancers arising from the endometrial lining), leiomyosarcomas (cancers of the uterine smooth muscle), and sarcomas (cancers arising from the stroma).

[027] Aberrant bleeding resulting from hormonal irregularities (commonly referred to a dysfunctional uterine bleeding) occurs most frequently at the beginning and end of the reproductive years and typically results from sustained levels of estrogen. For example, in polycystic ovary syndrome the overproduction of luteinizing hormone stimulates the production of large amounts of androgens – some of which are converted to estrogen-which, without sufficient progesterone to counteract its effects, induces abnormal uterine bleeding.

[028] Endometriosis is a disorder of the uterus in which patches of endometrial tissue, which normally is found only in the uterine lining, grow outside the uterus. Because the misplaced tissue responds to the same hormone that the uterus responds to, it may bleed during the menstrual period, causing cramps, pain, irritation, and the formation of scar tissue. As the disease progresses, adhesions may form and block the functioning of organs.

[029] Disorders of uterine contraction include, for example, dysmenorrhea and pre-term labor. During a normal period, the uterus undergoes mild contractions in order to aid in blood flow. Dysmenorrhea results when the contractions become inappropriately strong, inhibiting blood flow to the uterus. This deprives uterine muscle of oxygen, causing severe abdominal pain, as well as nausea, vomiting, diarrhea, headaches, weakness, and/or fainting. Sever cases of dysmenorrhea can significantly disrupt a womans life, leading to heavy work/school absenteeism and cases of pain killer addiction. Pre-term labor is also a serious problem, resulting in a dramatic rise in associated infant morbidity and mortality (83% of infant deaths occur

in gestations less than 37 weeks). Therapies for extending the length of pregnancy beyond 32 weeks, and preferably beyond 36 weeks, could significantly reduce the incidence of neonatal morbidity and virtually eliminate a major cause of neonatal mortality.

#### *Disorders of the Ovary*

[030] Anovulation (the absence of egg release by the ovaries) is a serious condition leading to infertility. The exact etiology of anovulation, especially in women with otherwise normal menstrual cycles, is unclear, however several potential causes are under study, including: impaired follicular development (probably due to low or absent estrogen production or binding), normal follicular development with lack of egg release (probably due to progesterone deficiency), or insufficient production of gonadotropin-releasing hormone from the hypothalamus. Current treatments include clomiphene injections or hormonal therapy, although both can lead to serious side effects such as ovarian cancer and ovarian hyperstimulation syndrome.

[031] Anovulation is also associated with polycystic ovary syndrome (also known as Stein-Leventhal syndrome). This syndrome is an endocrine disorder characterized by an elevated level of male hormones (androgens). Other than anovulation, symptoms include growth of male-patterned body hair (hirsutism), excessive acne, irregular or absent menses, excessive bleeding, and obesity. Usually, the ovaries appear enlarged and may contain many follicular cysts.

[032] Ovarian cancer develops most often in women between the ages of 50 and 70. It is the third most common cancer of the female reproductive system, but more women die of ovarian cancers than of any other. Ovaries include a variety of cell types, each of which may give rise to a distinct type of cancer, including, but not limited to, ovarian epithelial cancer, ovarian germ cell tumors, ovarian papillary serous adenocarcinoma, ovarian mucinous adenocarcinoma, ovarian Krukenberg tumor, malignant mixed Mullerian tumors, and ovarian low malignant tumors.

[033] Other disorders of the ovaries also include, but are not limited to, inflammatory disorders, such as oophoritis (e.g., caused by viral or bacterial infection), ovarian cysts, and autoimmune disorders (e.g., premature ovarian failure and autoimmune oophoritis).

*Disorders of the Vagina and Vulva*

[034] The vagina and vulva are self-cleaning. Secretions and discharges flow downward through the vagina and vulva, flushing out dead cells and other substances. Despite this cleaning mechanism, infections and inflammation are a common problem. The most common vaginal infections are bacterial vaginitis, candida vaginitis (e.g., yeast infections), trichomonas vaginitis, and vulvitis. Vaginal or vulvar itching, irritation, and abnormal discharge characterize all.

[035] Cancer of the vagina is extremely rare, accounting for only two percent of all gynecological cancers, and occurs primarily in women over the age of 50. The severity of the disease depends on the type of cancer and its exact location. Varieties include, for example, squamous cell carcinoma and clear cell adenocarcinoma. Once cancer appears in the vagina, it easily spreads to surrounding tissues. Vulvar cancer is equally unusual as vaginal, and is predominantly manifested as a form of skin cancer, e.g. squamous cell carcinomas and basal cell carcinomas. Other vulvar cancers include Paget's disease, cancer of Bartholin's gland, and melanomas. Unlike cancer of the vagina, vulvar cancers typically grow slowly and infrequently metastasize.

*Disorders of the Breast*

[036] Disorders of the breast typically involve the formation of lesions within breast tissue. While many of these lesions are benign in nature, they may lead to cancer if left untreated.

[037] Benign breast lesions include, for example, cysts, which are non-cancerous, fluid-filled sacs that form a mass within breast tissue. The cause of breast cysts is unknown, though injury may be involved, and their main symptom is pain. While considered harmless, a professional should drain cysts and the fluid examined because cancer of the cyst wall, although quite rare, is possible.

[038] Other benign breast lesions include fibrous breast lumps (fibroadenomas), breast infection (mastitis), intraductal papilloma, and abscesses. Fibrous breast lumps are small, solid lumps of glandular tissue. These lumps usually appear in young women, often in teenagers, and are easy to remove. Intraductal papilloma are small lumps located within a milk duct, often causing inappropriate discharge from the



nipple. Breast abscesses are collections of pus in breast tissue that develop from breast infections that go untreated.

[039] Breast cancer is the most common cancer among women, other than skin cancer and is the second leading cause of cancer death in women, after lung cancer. The American Cancer Society predicts that there will be about 182,800 new cases of invasive breast cancer in the year 2000 among women in this country and about 40,800 deaths from the disease. Breast cancer also occurs among men, although much less often. It is generally believed that this malignancy arises from a multi step process involving mutations in a relatively small number of genes, perhaps 10 or less. These mutations result in significant changes in the growth and differentiation of breast tissue that allow it to grow independent of normal cellular controls, to metastasize, and to escape immune surveillance. The genetic heterogeneity of most breast cancers suggests that they arise by a variety of initiating events and that the characteristics of individual cancers are due to the collective pattern of genetic changes that accumulate.

[040] The discovery of new human reproductive system associated polynucleotides, the polypeptides encoded by them, and antibodies that immunospecifically bind these polypeptides, satisfies a need in the art by providing new compositions which are useful in the diagnosis, treatment, prevention and/or prognosis of disorders of the reproductive system, including, but not limited to, disorders of the male reproductive system including, for example, testicular disorders (e.g., hypogonadism, infection (e.g., *Neisseria gonorrhoea*, Enterobacteriaceae, and/or as described in the "Reproductive System Disorders" section below), asthenospermia, teatospermia, cryptorchid testicle, testicular cancers, varicocele, and/or as described in the "Reproductive System Disorders" section below), prostate disorders (e.g., prostate cancers, benign prostatic hyperplasia, and/or as described in the "Reproductive System Disorders" section below), disorders of the penis (e.g., balanoposthitis, phimosis, genital warts, skin cancer, priapism, Peyronie's disease, erectile dysfunction, and/or as described in the "Reproductive System Disorders" section below); and disorders of the female reproductive system including, for example, disorders of the uterus (e.g., Cushing's syndrome, Asherman's syndrome, Turner's syndrome, premature menopause, uterine cancers, endometriosis, and/or as described in the "Reproductive System Disorders" section below), ovarian disorders (e.g., anovulation, polycystic ovary syndrome,

ovarian cancers, and/or as described in the "Reproductive System Disorders" section below), vaginal and vulvar disorders (e.g., vulvitis, vaginal infections, Paget's disease, cancers of the vagina and vulva, and/or as described in the "Reproductive System Disorders" section below), and breast disorders (e.g., breast cancers, fibroadenomas, intraductal papillomas, and/or as described in the "Reproductive System Disorders" section below).

### *Summary of the Invention*

[041] The present invention relates to novel reproductive system related polynucleotides, the polypeptides encoded by these polynucleotides herein collectively referred to as "reproductive system antigens," and antibodies that immunospecifically bind these polypeptides, and the use of such reproductive system polynucleotides, antigens, and antibodies for detecting, treating, preventing and/or prognosing disorders of the reproductive system, including, but not limited to, the presence of cancer and cancer metastases. More specifically, isolated reproductive system nucleic acid molecules are provided encoding novel reproductive system polypeptides. Novel reproductive system polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human reproductive system polynucleotides, polypeptides, and/or antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the reproductive system, including cancers of the reproductive system, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The invention further relates to methods and/or compositions for inhibiting or promoting the production and/or function of the polypeptides of the invention.

## *Detailed Description*

### Tables

[042] Table 1A summarizes some of the polynucleotides encompassed by the invention (including cDNA clones related to the sequences (Clone ID NO:Z), contig sequences (contig identifier (Contig ID:) and contig nucleotide sequence identifier (SEQ ID NO:X)) and further summarizes certain characteristics of these polynucleotides and the polypeptides encoded thereby. The first column provides a unique clone identifier, "Clone ID NO:Z", for a cDNA plasmid related to each reproductive system associated contig sequence disclosed in Table 1A. The second column provides a unique contig identifier, "Contig ID:" for each of the contig sequences disclosed in Table 1A. The third column provides the sequence identifier, "SEQ ID NO:X", for each of the contig polynucleotide sequences disclosed in Table 1A. The fourth column, "ORF (From-To)", provides the location (i.e., nucleotide position numbers) within the polynucleotide sequence of SEQ ID NO:X that delineate the preferred open reading frame (ORF) shown in the sequence listing and referenced in Table 1A as SEQ ID NO:Y (column 5). Column 6 lists residues comprising predicted epitopes contained in the polypeptides encoded by each of the preferred ORFs (SEQ ID NO:Y). Identification of potential immunogenic regions was performed according to the method of Jameson and Wolf (CABIOS, 4:181-186 (1988)); specifically, the Genetics Computer Group (GCG) implementation of this algorithm, embodied in the program PEPTIDESTRUCTURE (Wisconsin Package v10.0, Genetics Computer Group (GCG), Madison, Wisc.). This method returns a measure of the probability that a given residue is found on the surface of the protein. Regions where the antigenic index score is greater than 0.9 over at least 6 amino acids are indicated in Table 1A as "Predicted Epitopes." In particular embodiments, reproductive system associated polypeptides of the invention comprise, or alternatively consist of, one, two, three, four, five or more of the predicted epitopes described in Table 1A. It will be appreciated that depending on the analytical criteria used to predict antigenic determinants, the exact address of the determinant may vary slightly. Column 7, "Tissue Distribution" shows the expression profile of tissue, cells, and/or cell line libraries which express the polynucleotides of the invention. The first

number in column 7 (preceding the colon), represents the tissue/cell source identifier code corresponding to the code and description provided in Table 4. Expression of these polynucleotides was not observed in the other tissues and/or cell libraries tested. For those identifier codes in which the first two letters are not "AR", the second number in column 7 (following the colon), represents the number of times a sequence corresponding to the reference polynucleotide sequence (e.g., SEQ ID NO:X) was identified in the tissue/cell source. Those tissue/cell source identifier codes in which the first two letters are "AR" designate information generated using DNA array technology. Utilizing this technology, cDNAs were amplified by PCR and then transferred, in duplicate, onto the array. Gene expression was assayed through hybridization of first strand cDNA probes to the DNA array. cDNA probes were generated from total RNA extracted from a variety of different tissues and cell lines. Probe synthesis was performed in the presence of  $^{33}\text{P}$  dCTP, using oligo(dT) to prime reverse transcription. After hybridization, high stringency washing conditions were employed to remove non-specific hybrids from the array. The remaining signal, emanating from each gene target, was measured using a Phosphorimager. Gene expression was reported as Phosphor Stimulating Luminescence (PSL) which reflects the level of phosphor signal generated from the probe hybridized to each of the gene targets represented on the array. A local background signal subtraction was performed before the total signal generated from each array was used to normalize gene expression between the different hybridizations. The value presented after "[array code]:" represents the mean of the duplicate values, following background subtraction and probe normalization. One of skill in the art could routinely use this information to identify normal and/or diseased tissue(s) which show a predominant expression pattern of the corresponding polynucleotide of the invention or to identify polynucleotides which show predominant and/or specific tissue and/or cell expression. Column 8, "Cytologic Band," provides the chromosomal location of polynucleotides corresponding to SEQ ID NO:X. Chromosomal location was determined by finding exact matches to EST and cDNA sequences contained in the NCBI (National Center for Biotechnology Information) UniGene database. Given a presumptive chromosomal location, disease locus association was determined by comparison with the Morbid Map, derived from Online Mendelian Inheritance in Man (Online Mendelian

Inheritance in Man, OMIM™. McKusick-Nathans Institute for Genetic Medicine, Johns Hopkins University (Baltimore, MD) and National Center for Biotechnology Information, National Library of Medicine (Bethesda, MD) 2000. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>). If the putative chromosomal location of the Query overlapped with the chromosomal location of a Morbid Map entry, an OMIM identification number is provided in Table 1A, column 9 labeled "OMIM Disease Reference(s)". A key to the OMIM reference identification numbers is provided in Table 5.

[043] Table 1B summarizes additional polynucleotides encompassed by the invention (including cDNA clones related to the sequences (Clone ID NO:Z), contig sequences (contig identifier (Contig ID:) contig nucleotide sequence identifiers (SEQ ID NO:X)), and genomic sequences (SEQ ID NO:B). The first column provides a unique clone identifier, "Clone ID NO:Z", for a cDNA clone related to each contig sequence. The second column provides the sequence identifier, "SEQ ID NO:X", for each contig sequence. The third column provides a unique contig identifier, "Contig ID:" for each contig sequence. The fourth column, provides a BAC identifier "BAC ID NO:A" for the BAC clone referenced in the corresponding row of the table. The fifth column provides the nucleotide sequence identifier, "SEQ ID NO:B" for a fragment of the BAC clone identified in column four of the corresponding row of the table. The sixth column, "Exon From-To", provides the location (i.e., nucleotide position numbers) within the polynucleotide sequence of SEQ ID NO:B which delineate certain polynucleotides of the invention that are also exemplary members of polynucleotide sequences that encode polypeptides of the invention (e.g., polypeptides containing amino acid sequences encoded by the polynucleotide sequences delineated in column six, and fragments and variants thereof).

[044] Table 2 summarizes homology and features of some of the polypeptides of the invention. The first column provides a unique clone identifier, "Clone ID NO:Z", corresponding to a cDNA disclosed in Table 1A. The second column provides the unique contig identifier, "Contig ID:" corresponding to contigs in Table 1A and allowing for correlation with the information in Table 1A. The third column provides the sequence identifier, "SEQ ID NO:X", for the contig polynucleotide sequences. The fourth column provides the analysis method by which the homology/identity

disclosed in the row was determined. Comparisons were made between polypeptides encoded by the polynucleotides of the invention and either a non-redundant protein database (herein referred to as "NR"), or a database of protein families (herein referred to as "PFAM") as further described below. The fifth column provides a description of PFAM/NR hits having significant matches to a polypeptide of the invention. Column six provides the accession number of the PFAM/NR hit disclosed in the fifth column. Column seven, "Score/Percent Identity", provides a quality score or the percent identity, of the hit disclosed in column five. Columns 8 and 9, "NT From" and "NT To" respectively, delineate the polynucleotides in "SEQ ID NO:X" that encode a polypeptide having a significant match to the PFAM/NR database as disclosed in the fifth column. In specific embodiments, polypeptides of the invention comprise, or alternatively consist of, an amino acid sequence encoded by the polynucleotides in SEQ ID NO:X as delineated in columns 8 and 9, or fragments or variants thereof.

[045] Table 3 provides polynucleotide sequences that may be disclaimed according to certain embodiments of the invention. The first column provides a unique clone identifier, "Clone ID NO:Z", for a cDNA clone related to reproductive system associated contig sequences disclosed in Table 1A. The second column provides the sequence identifier, "SEQ ID NO:X", for contig polynucleotide sequences disclosed in Table 1A. The third column provides the unique contig identifier, "Contig ID", for contigs disclosed in Table 1A. The fourth column provides a unique integer 'a' where 'a' is any integer between 1 and the final nucleotide minus 15 of SEQ ID NO:X, represented as "Range of a", and the fifth column provides a unique integer 'b' where 'b' is any integer between 15 and the final nucleotide of SEQ ID NO:X, represented as "Range of b", where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:X, and where b is greater than or equal to a + 14. For each of the polynucleotides shown as SEQ ID NO:X, the uniquely defined integers can be substituted into the general formula of a-b, and used to describe polynucleotides which may be preferably excluded from the invention. In certain embodiments, preferably excluded from the polynucleotides of the invention (including polynucleotide fragments and variants as described herein and diagnostic and/or therapeutic uses based on these polynucleotides) are at least one, two, three, four, five, ten, or more of the polynucleotide sequence(s) having the accession number(s) disclosed in the sixth

column of this Table (including for example, published sequence in connection with a particular BAC clone). In further embodiments, preferably excluded from the invention are the specific polynucleotide sequence(s) contained in the clones corresponding to at least one, two, three, four, five, ten, or more of the available material having the accession numbers identified in the sixth column of this Table (including for example, the actual sequence contained in an identified BAC clone).

[046] Table 4 provides a key to the tissue/cell source identifier code disclosed in Table 1A, column 7. Column 1 provides the key to the tissue/cell source identifier code disclosed in Table 1A, Column 7. Columns 2-5 provide a description of the tissue or cell source. Codes corresponding to diseased tissues are indicated in column 6 with the word "disease". The use of the word "disease" in column 6 is non-limiting. The tissue or cell source may be specific (e.g. a neoplasm), or may be disease-associated (e.g., a tissue sample from a normal portion of a diseased organ). Furthermore, tissues and/or cells lacking the "disease" designation may still be derived from sources directly or indirectly involved in a disease state or disorder, and therefore may have a further utility in that disease state or disorder. In numerous cases where the tissue/cell source is a library, column 7 identifies the vector used to generate the library.

[047] Table 5 provides a key to the OMIM<sup>TM</sup> reference identification numbers disclosed in Table 1A, column 9. OMIM reference identification numbers (Column 1) were derived from Online Mendelian Inheritance in Man (Online Mendelian Inheritance in Man, OMIM<sup>TM</sup>. McKusick-Nathans Institute for Genetic Medicine, Johns Hopkins University (Baltimore, MD) and National Center for Biotechnology Information, National Library of Medicine, (Bethesda, MD) 2000. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>). Column 2 provides diseases associated with the cytologic band disclosed in Table 1A, column 8, as determined from the Morbid Map database.

[048] Table 6 summarizes ATCC Deposits, Deposit dates, and ATCC designation numbers of deposits made with the ATCC in connection with the present application.

[049] Table 7 shows the cDNA libraries sequenced, tissue source description, vector information and ATCC designation numbers relating to these cDNA libraries.

[050] Table 8 provides a physical characterization of clones encompassed by the invention. The first column provides the unique clone identifier, "Clone ID NO:Z",

for certain cDNA clones of the invention, as described in Table 1A. The second column provides the size of the cDNA insert contained in the corresponding cDNA clone.

### **Definitions**

[051] The following definitions are provided to facilitate understanding of certain terms used throughout this specification.

[052] In the present invention, "isolated" refers to material removed from its original environment (e.g., the natural environment if it is naturally occurring), and thus is altered "by the hand of man" from its natural state. For example, an isolated polynucleotide could be part of a vector or a composition of matter, or could be contained within a cell, and still be "isolated" because that vector, composition of matter, or particular cell is not the original environment of the polynucleotide. The term "isolated" does not refer to genomic or cDNA libraries, whole cell total or mRNA preparations, genomic DNA preparations (including those separated by electrophoresis and transferred onto blots), sheared whole cell genomic DNA preparations or other compositions where the art demonstrates no distinguishing features of the polynucleotide sequences of the present invention.

[053] As used herein, a "polynucleotide" refers to a molecule having a nucleic acid sequence encoding SEQ ID NO:Y or a fragment or variant thereof, a nucleic acid sequence contained in SEQ ID NO:X (as described in column 3 of Table 1A) or the complement thereof, a cDNA sequence contained in Clone ID NO:Z (as described in column 1 of Table 1A and contained within a library deposited with the ATCC); a nucleotide sequence encoding the polypeptide encoded by a nucleotide sequence in SEQ ID NO:B as defined in column 6 of Table 1B or a fragment or variant thereof; or a nucleotide coding sequence in SEQ ID NO:B as defined in column 6 of Table 1B or the complement thereof. For example, the polynucleotide can contain the nucleotide sequence of the full length cDNA sequence, including the 5' and 3' untranslated sequences, the coding region, as well as fragments, epitopes, domains, and variants of the nucleic acid sequence. Moreover, as used herein, a "polypeptide" refers to a molecule having an amino acid sequence encoded by a polynucleotide of the invention as broadly defined (obviously excluding poly-Phenylalanine or poly-Lysine peptide



sequences which result from translation of a polyA tail of a sequence corresponding to a cDNA).

[054] As used herein, a "reproductive system antigen" refers collectively to any polynucleotide disclosed herein (e.g., a nucleic acid sequence contained in SEQ ID NO:X or the complement thereof, or cDNA sequence contained in Clone ID NO:Z, or a nucleotide sequence encoding the polypeptide encoded by a nucleotide sequence in SEQ ID NO:B as defined in column 6 of Table 1B, or a nucleotide coding sequence in SEQ ID NO:B as defined in column 6 of Table 1B or the complement thereof and fragments or variants thereof as described herein) or any polypeptide disclosed herein (e.g., an amino acid sequence contained in SEQ ID NO:Y, an amino acid sequence encoded by SEQ ID NO:X, or the complement thereof, an amino acid sequence encoded by the cDNA sequence contained in Clone ID NO:Z, an amino acid sequence encoded by SEQ ID NO:B, or the complement thereof, and fragments or variants thereof as described herein). These reproductive system antigens have been determined to be predominantly expressed in reproductive system tissues, including normal or diseased tissues (as shown in Table 1A column 7 and Table 4).

[055] In the present invention, "SEQ ID NO:X" was often generated by overlapping sequences contained in multiple clones (contig analysis). A representative clone containing all or most of the sequence for SEQ ID NO:X is deposited at Human Genome Sciences, Inc. (HGS) in a catalogued and archived library. As shown, for example, in column 1 of Table 1A, each clone is identified by a cDNA Clone ID (identifier generally referred to herein as Clone ID NO:Z). Each Clone ID is unique to an individual clone and the Clone ID is all the information needed to retrieve a given clone from the HGS library. Furthermore, certain clones disclosed in this application have been deposited with the ATCC on October 5, 2000, having the ATCC designation numbers PTA 2574 and PTA 2575; and on January 5, 2001, having the depositor reference numbers TS-1, TS-2, AC-1, and AC-2. In addition to the individual cDNA clone deposits, most of the cDNA libraries from which the clones were derived were deposited at the American Type Culture Collection (hereinafter "ATCC"). Table 7 provides a list of the deposited cDNA libraries. One can use the Clone ID NO:Z to determine the library source by reference to Tables 6 and 7. Table 7 lists the deposited cDNA libraries by name and links each library to an ATCC

Deposit. Library names contain four characters, for example, "HTWE." The name of a cDNA clone (Clone ID NO:Z) isolated from that library begins with the same four characters, for example "HTWEP07". As mentioned below, Table 1A correlates the Clone ID NO:Z names with SEQ ID NO:X. Thus, starting with an SEQ ID NO:X, one can use Tables 1A, 6 and 7 to determine the corresponding Clone ID NO:Z, which library it came from and which ATCC deposit the library is contained in. Furthermore, it is possible to retrieve a given cDNA clone from the source library by techniques known in the art and described elsewhere herein. The ATCC is located at 10801 University Boulevard, Manassas, Virginia 20110-2209, USA. The ATCC deposits were made pursuant to the terms of the Budapest Treaty on the international recognition of the deposit of microorganisms for the purposes of patent procedure.

[056] In specific embodiments, the polynucleotides of the invention are at least 15, at least 30, at least 50, at least 100, at least 125, at least 500, or at least 1000 continuous nucleotides but are less than or equal to 300 kb, 200 kb, 100 kb, 50 kb, 15 kb, 10 kb, 7.5 kb, 5 kb, 2.5 kb, 2.0 kb, or 1 kb, in length. In a further embodiment, polynucleotides of the invention comprise a portion of the coding sequences, as disclosed herein, but do not comprise all or a portion of any intron. In another embodiment, the polynucleotides comprising coding sequences do not contain coding sequences of a genomic flanking gene (i.e., 5' or 3' to the gene of interest in the genome). In other embodiments, the polynucleotides of the invention do not contain the coding sequence of more than 1000, 500, 250, 100, 50, 25, 20, 15, 10, 5, 4, 3, 2, or 1 genomic flanking gene(s).

[057] A "polynucleotide" of the present invention also includes those polynucleotides capable of hybridizing, under stringent hybridization conditions, to sequences contained in SEQ ID NO:X, or the complement thereof (e.g., the complement of any one, two, three, four, or more of the polynucleotide fragments described herein), the polynucleotide sequence delineated in columns 8 and 9 of Table 2 or the complement thereof, and/or cDNA sequences contained in Clone ID NO:Z (e.g., the complement of any one, two, three, four, or more of the polynucleotide fragments, or the cDNA clone within the pool of cDNA clones deposited with the ATCC, described herein) and/or the polynucleotide sequence delineated in column 6 of Table 1B or the complement thereof. "Stringent hybridization conditions" refers to an overnight incubation at 42

degree C in a solution comprising 50% formamide, 5x SSC (750 mM NaCl, 75 mM trisodium citrate), 50 mM sodium phosphate (pH 7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 µg/ml denatured, sheared salmon sperm DNA, followed by washing the filters in 0.1x SSC at about 65 degree C.

[058] Also contemplated are nucleic acid molecules that hybridize to the polynucleotides of the present invention at lower stringency hybridization conditions. Changes in the stringency of hybridization and signal detection are primarily accomplished through the manipulation of formamide concentration (lower percentages of formamide result in lowered stringency), salt conditions, or temperature. For example, lower stringency conditions include an overnight incubation at 37 degree C in a solution comprising 6X SSPE (20X SSPE = 3M NaCl; 0.2M NaH<sub>2</sub>PO<sub>4</sub>; 0.02M EDTA, pH 7.4), 0.5% SDS, 30% formamide, 100 µg/ml salmon sperm blocking DNA; followed by washes at 50 degree C with 1XSSPE, 0.1% SDS. In addition, to achieve even lower stringency, washes performed following stringent hybridization can be done at higher salt concentrations (e.g. 5X SSC).

[059] Note that variations in the above conditions may be accomplished through the inclusion and/or substitution of alternate blocking reagents used to suppress background in hybridization experiments. Typical blocking reagents include Denhardt's reagent, BLOTTO, heparin, denatured salmon sperm DNA, and commercially available proprietary formulations. The inclusion of specific blocking reagents may require modification of the hybridization conditions described above, due to problems with compatibility.

[060] Of course, a polynucleotide which hybridizes only to polyA<sup>+</sup> sequences (such as any 3' terminal polyA<sup>+</sup> tract of a cDNA shown in the sequence listing), or to a complementary stretch of T (or U) residues, would not be included in the definition of "polynucleotide," since such a polynucleotide would hybridize to any nucleic acid molecule containing a poly (A) stretch or the complement thereof (e.g., practically any double-stranded cDNA clone generated using oligo dT as a primer).

[061] The polynucleotide of the present invention can be composed of any polyribonucleotide or polydeoxribonucleotide, which may be unmodified RNA or DNA or modified RNA or DNA. For example, polynucleotides can be composed of single- and double-stranded DNA, DNA that is a mixture of single- and double-

stranded regions, single- and double-stranded RNA, and RNA that is mixture of single- and double-stranded regions, hybrid molecules comprising DNA and RNA that may be single-stranded or, more typically, double-stranded or a mixture of single- and double-stranded regions. In addition, the polynucleotide can be composed of triple-stranded regions comprising RNA or DNA or both RNA and DNA. A polynucleotide may also contain one or more modified bases or DNA or RNA backbones modified for stability or for other reasons. "Modified" bases include, for example, tritylated bases and unusual bases such as inosine. A variety of modifications can be made to DNA and RNA; thus, "polynucleotide" embraces chemically, enzymatically, or metabolically modified forms.

[062] The polypeptide of the present invention can be composed of amino acids joined to each other by peptide bonds or modified peptide bonds, i.e., peptide isosteres, and may contain amino acids other than the 20 gene-encoded amino acids. The polypeptides may be modified by either natural processes, such as posttranslational processing, or by chemical modification techniques which are well known in the art. Such modifications are well described in basic texts and in more detailed monographs, as well as in a voluminous research literature. Modifications can occur anywhere in a polypeptide, including the peptide backbone, the amino acid side-chains and the amino or carboxyl termini. It will be appreciated that the same type of modification may be present in the same or varying degrees at several sites in a given polypeptide. Also, a given polypeptide may contain many types of modifications. Polypeptides may be branched, for example, as a result of ubiquitination, and they may be cyclic, with or without branching. Cyclic, branched, and branched cyclic polypeptides may result from posttranslation natural processes or may be made by synthetic methods. Modifications include acetylation, acylation, ADP-ribosylation, amidation, covalent attachment of flavin, covalent attachment of a heme moiety, covalent attachment of a nucleotide or nucleotide derivative, covalent attachment of a lipid or lipid derivative, covalent attachment of phosphatidylinositol, cross-linking, cyclization, disulfide bond formation, demethylation, formation of covalent cross-links, formation of cysteine, formation of pyroglutamate, formylation, gamma-carboxylation, glycosylation, GPI anchor formation, hydroxylation, iodination, methylation, myristoylation, oxidation, pegylation, proteolytic processing,

phosphorylation, prenylation, racemization, selenoylation, sulfation, transfer-RNA mediated addition of amino acids to proteins such as arginylation, and ubiquitination. (See, for instance, PROTEINS - STRUCTURE AND MOLECULAR PROPERTIES, 2nd Ed., T. E. Creighton, W. H. Freeman and Company, New York (1993); POSTTRANSLATIONAL COVALENT MODIFICATION OF PROTEINS, B. C. Johnson, Ed., Academic Press, New York, pgs. 1-12 (1983); Seifter et al., Meth. Enzymol. 182:626-646 (1990); Rattan et al., Ann. N.Y. Acad. Sci. 663:48-62 (1992).)

[063] "SEQ ID NO:X" refers to a polynucleotide sequence described, for example, in Tables 1A or 2, while "SEQ ID NO:Y" refers to a polypeptide sequence described in column 5 of Table 1A. SEQ ID NO:X is identified by an integer specified in column 3 of Table 1A. The polypeptide sequence SEQ ID NO:Y is a translated open reading frame (ORF) encoded by polynucleotide SEQ ID NO:X. "Clone ID NO:Z" refers to a cDNA clone described in column 1 of Table 1A.

[064] "A polypeptide having biological activity" refers to a polypeptide exhibiting activity similar to, but not necessarily identical to, an activity of a polypeptide of the present invention, including mature forms, as measured in a particular biological assay, with or without dose dependency. In the case where dose dependency does exist, it need not be identical to that of the polypeptide, but rather substantially similar to the dose-dependence in a given activity as compared to the polypeptide of the present invention (i.e., the candidate polypeptide will exhibit greater activity or not more than about 25-fold less and, preferably, not more than about tenfold less activity, and most preferably, not more than about three-fold less activity relative to the polypeptide of the present invention).

[065] Table 1A summarizes some of the reproductive system associated polynucleotides encompassed by the invention (including contig sequences (SEQ ID NO:X) and clones (Clone ID NO:Z) and further summarizes certain characteristics of these polynucleotides and the polypeptides encoded thereby.

#### **Polynucleotides and Polypeptides**

TABLE 1A

Clone ID NO: Z	Contig ID:	SEQ ID NO: X	ORF (From-To)	AA SEQ ID NO: Y	Predicted Epitopes	Tissue Distribution Library code: count (see Table IV for Library Codes)	Cytologic Band	OMIM Disease Reference(s):
H7MCE35	928554	11	71 - 3	2698		S0286: 1 and S0284: 1.		
H7MDC49	722780	12	125 - 3	2699		S0284: 2 and L0758: 1.		
H7MDD72	847688	13	100 - 510	2700	Glu-9 to Gly-22, Lys-50 to Lys-69, Gly-91 to Arg-107, Pro-113 to Ile-129, Tyr-131 to Gln-137.	AR054: 6, AR050: 2, AR051: 1, AR089: 1, AR061: 0 S0284: 2		
	887805	2651	3 - 824	5338				
HAOSH55	952380	14	2 - 355	2701	Pro-17 to Glu-28, Gly-86 to Ser-92.	L0770: 3, H0686: 1, H0634: 1, L0761: 1, L0772: 1, L0764: 1, L0805: 1, L0786: 1 and L0779: 1.		
HAQAK73	764671	15	449 - 661	2702	Glu-16 to Pro-21, Leu-28 to Asp-34, Glu-39 to Ser-56, Glu-59 to Gly-67.	H0295: 2 and L0748: 2.		
HAQAM17	664979	16	1 - 198	2703		H0295: 1 and H0435: 1.		
HAQBF84	783259	17	2 - 70	2704		H0295: 2		
HAQBJ71	839982	18	17 - 367	2705	Ala-55 to Phe-72.	H0295: 3 and H0294: 1.		
HAQBQ50	522004	19	3 - 59	2706		H0295: 2		

HAQBS37	847519	20	159 - 437	2707			H0295: 2, L0649: 1, L0663: 1, H0435: 1 and H0670: 1.		
HAUBD69	529711	21	3 - 134	2708			H0294: 2 and H0435: 1.		
HAUBU10	968339	22	209 - 337	2709			H0294: 2		
HBCJS08	957826	23	228 - 374	2710		Val-17 to Thr-27.	H0664: 2		
HBCPD14	963634	24	15 - 140	2711			H0663: 1 and S0152: 1.		
HBCQJ03	922401	25	138 - 1	2712		Arg-1 to Trp-15.	H0663: 2		
HBCQS90	951787	26	3 - 317	2713		Glu-24 to Lys-29, Lys-35 to Gln-40.	H0663: 2, L0758: 2, L0748: 1 and L0591: 1.		
HBCQS93	930682	27	390 - 575	2714		Gly-1 to Gly-6, Gly-41 to Pro-46.	L0749: 2, H0663: 1, H0662: 1 and L0438: 1.		
HGBD28	525846	28	3 - 185	2715		Asn-37 to Gly-44.	H0181: 2		
HGBF56	957870	29	2 - 184	2716		Pro-31 to Glu-36.	H0181: 1 and H0617: 1.		
HGBG42	922396	30	1 - 420	2717			H0662: 2, H0181: 2, L0766: 2, L0455: 1, L0740: 1, L0779: 1 and L0362: 1.		
HGBH43	524532	31	1 - 195	2718			H0553: 2, H0181: 2, L0743: 2, L0639: 1, L0787: 1, L0790: 1, L0747: 1, L0780: 1, L0752: 1 and L0755: 1.		
HGBS07	954299	32	1 - 324	2719		Val-57 to Leu-66, Val-79 to Gly-84.	H0181: 2	1q21	104770, 107670, 110700, 135940,

								145001, 146790, 152445, 152445, 159001, 174000, 179755, 182860, 182860, 182860, 191315, 230800, 230800, 266200, 600897, 601105, 601412, 601652, 602491
HBGBT79	525352	33	109 - 306	2720	Arg-7 to Trp-17.	H0181: 2		
HBGBW60	954916	34	52 - 492	2721		H0617: 2 and H0181: 1.		
HBGBW72	524956	35	31 - 156	2722	Glu-1 to Gly-9.	H0181: 2 and H0617: 1.		
HBGDA44	525618	36	163 - 507	2723	Thr-1 to Pro-6.	H0181: 2		
HBGDE85	524875	37	1 - 132	2724	Pro-6 to Leu-12.	H0181: 2		
HBGDS13	971696	38	122 - 259	2725		H0181: 1 and H0617: 1.		
HBGDT43	974223	39	2 - 220	2726	Trp-8 to Gln-20.	H0181: 3		
HBGFA62	954306	40	3 - 302	2727	Gln-19 to Glu-24,	L0040: 1, H0188: 1,		



							Arg-29 to Pro-35, Ser-47 to Ser-56, Pro-58 to Ser-64.	H0606: 1, L0762: 1, L0803: 1, L0774: 1 and L0509: 1.			
HBGMD05	870189	41	266 - 589	2728			Thr-1 to Ser-6, Thr-23 to Pro-30.	H0617: 2			
HBGMD62	933763	42	84 - 329	2729			Leu-36 to Asn-42.	H0617: 3			
HBGMF10	966132	43	162 - 434	2730			Pro-13 to Ser-19, Pro-60 to Ala-76, Asp-78 to Gly-85.	L0764: 2, L0783: 2, H0182: 1, H0617: 1, H0616: 1, L0765: 1, L0375: 1, L0659: 1, L0809: 1, L0663: 1, L0731: 1 and L0361: 1.			
HBGMG29	845194	44	22 - 279	2731			Arg-71 to Arg-76.	H0617: 2			
HBGMZ39	947112	45	575 - 3	2732			Arg-37 to Phe-48, Asp-55 to Asp-63, Gly-73 to Ala-80, Gln-147 to Trp-154, Val-176 to Lys-191.	AR089: 15, AR061: 10 H0617: 8, L0763: 2, L0754: 2, H0483: 1 and L0743: 1.			
HBGNA08	958257	46	82 - 162	2733				H0617: 2			
HBGND09	848219	47	1 - 522	2734			Gly-1 to Arg-8, Gly-17 to Val-25, Gln-27 to Gln-32, Ala-56 to Gly-64, Glu-121 to Thr-129, Arg-156 to Asp-174.	H0617: 2, L0758: 2, H0181: 1, L0521: 1, L0666: 1 and L0779: 1.			
HBGNJ14	914594	48	1 - 330	2735			Gly-3 to Thr-15, Pro-49 to Ser-54, Pro-56 to His-63, Gly-81 to Pro-87, Pro-92 to Thr-98.	H0617: 3			

HBGNM13	912730	49	12 - 197	2736			H0617: 2		
HBGNO07	952212	50	2 - 358	2737	Glu-14 to Cys-20, Glu-22 to His-32, Asp-39 to Thr-52, Lys-92 to Asp-101.		H0181: 1 and H0617: 1.		
HBGNQ31	887152	51	2 - 268	2738	Cys-7 to Gly-12, Ser-19 to Thr-26, Ala-31 to Leu-36, Ser-47 to Ser-57, Glu-75 to Phe-83.		AR054: 129, AR051: 118, AR050: 110 H0617: 4 and L0770: 2.		
HBGNW29	969396	52	24 - 263	2739	Gly-58 to Pro-69.		H0617: 2, H0663: 1 and H0181: 1.		
HBGOB07	883111	53	10 - 420	2740	Thr-21 to Lys-27, Cys-33 to Pro-38, Lys-68 to Trp-103, Pro-118 to Val-124, Pro-129 to Lys-137.		H0617: 2, L0439: 2, L0771: 1, L0766: 1, L0779: 1 and L0752: 1.		
HBGOI28	967261	54	195 - 599	2741	Leu-30 to Thr-56, Arg-61 to Thr-71.		H0617: 2		
HBGOK53	848156	55	3 - 278	2742			H0617: 2		
HBGOL08	958290	56	1 - 369	2743			L0041: 2, H0617: 2, L0659: 1, L0438: 1 and L0601: 1.		
HBGPE04	926876	57	1 - 219	2744	Gly-22 to Ala-31, Arg-58 to Trp-73.		H0617: 2		
HBGPH02	918513	58	158 - 340	2745	Leu-14 to Pro-20, Ser-49 to Ile-55.		H0617: 2, L0780: 1, L0752: 1 and L0594: 1.		
HBGPK33	973425	59	14 - 274	2746			H0617: 4		
HBGPV05	930706	60	2 - 205	2747	Pro-13 to Arg-26.		H0617: 3		

HBGQG66	954302	61	1 - 309	2748	Met-3 to Asn-8, Ala-11 to Pro-39.	H0181: 1 and H0617: 1.		
HBGSD40	923142	62	3 - 413	2749	Arg-4 to His-10, Pro-14 to Thr-20, Glu-28 to Arg-35, Thr-40 to Ser-56, Thr-61 to Ser-75, Pro-93 to Arg-102, Asp-118 to Arg-124.	L0777: 3, H0617: 2, L0731: 2, H0606: 1, L0769: 1, L0803: 1, L0743: 1, L0744: 1, L0750: 1 and L0779: 1.		
HBGTR84	886529	65	3 - 581	2752	Asp-43 to Arg-49, Glu-55 to Asp-64, Glu-75 to Arg-81, Leu-89 to Gly-98, Leu-110 to Lys-115, Asn-131 to Thr-141, Asn-152 to Lys-160.	AR051: 23, AR050: 17, AR054: 16 H0617: 4		
HBNAB01	966536	66	1 - 138	2753	Ser-8 to Leu-20.	H0253: 1 and H0188: 1.	17p13.1	191170, 191170
HBNAF14	660800	67	86 - 271	2754		H0618: 1 and H0188: 1.		
HBNAI71	655514	68	1 - 231	2755		H0188: 2		
HBNAN41	655842	69	123 - 302	2756	Asn-3 to Ser-15, Lys-21 to Asn-30.	H0188: 2		
HBNAW92	524954	70	2 - 226	2757	Gly-21 to Pro-27.	H0188: 2		
HBNAX71	530843	71	1 - 87	2758		H0188: 2		
HBNAY58	558193	72	245 - 400	2759	Leu-14 to Thr-20.	H0188: 2 and L0603: 1.		

HBNBT52	524869	73	201 - 380	2760	Gln-48 to Pro-56.	H0188: 2	
HBZAJ09	655769	74	1 - 330	2761	Phe-13 to Phe-18, Gly-23 to Arg-38.	S0188: 2	
HBZSH16	655619	75	93 - 212	2762	Ser-1 to Ser-11.	S0190: 2	
HBZSH71	760418	76	116 - 301	2763	Thr-29 to Arg-34.	S0190: 2	
HBZSI73	655737	77	2 - 352	2764		S0190: 2	
HBZSK17	664013	78	111 - 383	2765	Val-3 to Lys-9.	H0059: 1 and S0190: 1.22q11.2-q13.2	123620, 138720, 145410, 188826, 231950, 239500, 275350, 600850
HCBMV01	914333	79	322 - 119	2766	Ser-1 to Met-6.	H0661: 1 and H0553: 1.	
HCBNW02	950897	80	183 - 521	2767		H0661: 2	
HCBNW07	951820	81	8 - 130	2768	Lys-28 to Phe-34.	L0770: 3, L0776: 3, H0686: 1, H0661: 1, L0021: 1, L0761: 1, L0766: 1, L0659: 1, L0647: 1, L0752: 1 and L0605: 1.	
HCBOG03	922351	82	2 - 283	2769	Lys-33 to Arg-38.	H0661: 2	
HCDMB01	915613	83	3 - 125	2770		S0398: 2	
HCDMB16	835781	84	2 - 181	2771		S0398: 2	
HCDMB60	726339	85	22 - 120	2772	Thr-6 to Leu-12, Tyr-19 to Lys-28.	S0398: 2	
HCDMC01	915239	86	2 - 901	2773	Ser-10 to Gly-23.	L0758: 13, H0253: 4,	

									H0618: 3, H0038: 1, L0779: 1 and S0398: 1.			
HCDMD23	676799	87	2 - 184	2774					S0398: 2			
HCHAD40	923764	88	78 - 269	2775				Lys-29 to Arg-34.	H0483: 2	13		
HCHAR16	675465	89	3 - 134	2776				Cys-1 to Pro-10, Thr-19 to Glu-28, Arg-36 to Asn-44.	H0483: 2			
HCHAR43	715128	90	1 - 366	2777				Ser-24 to Gly-29, Asn-47 to Pro-53, Pro-74 to Gly-79.	H0483: 2	Xp22.3	300077, 300500, 300650, 301200, 302350, 302950, 308700, 311200, 312040	
HCHAR67	665184	91	1 - 318	2778				Phe-24 to Gln-30, Gln-32 to Leu-42.	H0483: 1 and H0550: 1.			
HCHBQ03	923763	92	190 - 459	2779				Asp-1 to Phe-21.	H0483: 4 and H0484: 1.	13		
HCHML32	668518	93	35 - 343	2780					H0484: 2			
HCHND96	880585	94	144 - 455	2781				Glu-14 to Ser-21, Asp-67 to Asp-73.	H0616: 7, L0758: 5, H0484: 1, H0040: 1, L0768: 1, L0774: 1 and L0775: 1.			
HCHOA76	740102	95	1 - 321	2782				Leu-26 to Cys-39, Cys-41 to Lys-50, Gly-87 to Glu-93.	H0484: 2			
HCHOD89	954866	96	2 - 214	2783				Glu-11 to Gly-17, Arg-25 to Ser-36.	H0484: 1 and H0483: 1.			

HCHPO55	717671	97	1 - 129	2784	Gly-1 to Gly-14.	H0484: 1 and H0483: 1.		
HCHQB06	934941	98	3 - 455	2785	Pro-13 to Gly-20, Ser-29 to Ala-45, Ser-66 to Ala-72, Phe-74 to Trp-87, Pro-102 to Arg-107.	H0484: 2, L0803: 1 and L0758: 1.		
HCMSE07	927904	99	522 - 896	2786	Ala-2 to Lys-10, Glu-70 to Gln-76.	AR089: 42, AR061: 34 H0651: 154, L0731: 9, L0777: 6, L0803: 4, L0775: 3, H0196: 2, H0163: 2, L0662: 2, L0805: 2, L0783: 2, L0438: 2, L0740: 2, L0759: 2, H0170: 1, S0444: 1, H0592: 1, H0632: 1, L0471: 1, H0399: 1, H0615: 1, H0040: 1, S0294: 1, H0647: 1, L0598: 1, L0763: 1, L0638: 1, L0637: 1, L0642: 1, L0374: 1, L0767: 1, L0768: 1, L0794: 1, L0804: 1, L0774: 1, L0375: 1, L0776: 1, L0606: 1, L0659: 1, L0809: 1, L0647: 1, L0789: 1, L0791: 1, L0666: 1, L0663: 1,		

								L0664: 1, L0665: 1, H0659: 1, H0658: 1, H0672: 1, S0328: 1, H0539: 1, S0380: 1, L0439: 1, L0779: 1, L0594: 1, L0361: 1, S0026: 1, S0242: 1 and S0460: 1.			
HCOMZ41	932878	100	120 - 296	2787		Arg-1 to Pro-10, Ple-21 to Gly-34.		L0768: 2, H0150: 1 and H0670: 1.			
HCOOG04	925748	101	68 - 3	2788		Tyr-10 to Cys-17.		H0670: 2			
HCOOI07	951665	102	75 - 458	2789		Ser-40 to Gly-45, Pro-55 to Asp-67.		H0670: 2			
HCOOM77	969161	103	83 - 283	2790				H0670: 2			
HCOOX10	961595	104	1 - 471	2791		Val-19 to Trp-24, Lys-70 to Lys-78, Ser-83 to Leu-100, Val-112 to Trp-117, Thr-119 to Lys-125, Cys-133 to Pro-143.		H0059: 1, L0803: 1 and H0670: 1.			
HCOOZ11	965306	105	89 - 592	2792		Asp-43 to Glu-48.		AR089: 15, AR061: 5 H0662: 2, H0670: 1, L0756: 1 and L0759: 1.	22q13.1-q13.2	103050, 103050, 124030, 124030, 138981, 182380, 188826, 190040, 190040, 190040	

HCOPP18	954332	106	259 - 585	2793	Gly-11 to Ser-16.	H0169: 2, L0809: 1, H0670: 1 and L0599: 1.		
HCOQE11	965299	107	409 - 684	2794	Gln-20 to Tyr-25, Asp-73 to Ser-79.	H0670: 4, L0776: 2, L0666: 2, L0759: 2, H0661: 1, L0717: 1, L0664: 1, L0779: 1, L0777: 1, L0752: 1 and L0755: 1.		
HCOQH12	969151	108	292 - 564	2795	Ala-52 to Lys-58, Gly-72 to Arg-79.	H0670: 2 and L0366: 1.		
HCOQQ07	951658	109	187 - 429	2796		H0670: 2		
HE8SG46	961388	110	1335 - 1553	2797	Glu-40 to Asn-46.	H0683: 122, L0740: 6, L0747: 5, L0438: 4, L0439: 4, L0756: 3, H0156: 2, L0521: 2, H0658: 2, L0754: 2, L0750: 2, L0779: 2, L0777: 2, L0731: 2, L0759: 2, H0171: 1, H0486: 1, H0244: 1, H0427: 1, H0310: 1, H0052: 1, H0263: 1, H0596: 1, L0163: 1, H0051: 1, H0328: 1, S0112: 1, L0768: 1, L0803: 1, L0774: 1, L0527: 1, L0517: 1, L0783: 1, L0666: 1, L0663: 1, H0670: 1, H0648: 1, S0152: 1,		



HEAAA42	963100	111	3 - 272	2798			S0146: 1, H0478: 1, L0752: 1, L0758: 1 and S0412: 1.		
							AR061: 8, AR089: 5 H0038: 4, H0616: 3, L0747: 3, L0663: 2, L0758: 2, H0369: 1, H0428: 1, L0769: 1, L0542: 1, L0809: 1, L0666: 1, L0665: 1, L0743: 1, L0777: 1, L0731: 1 and S0456: 1.		
HEAAB77	574510	112	1 - 360	2799		Glu-7 to Arg-24.	H0369: 2		
HEAAK46	574232	113	69 - 188	2800		His-33 to Val-39.	H0369: 2 and H0664: 1.		
HEAAM16	574008	114	114 - 221	2801			H0369: 2		
HEAAM52	960579	115	2 - 154	2802			H0369: 1 and H0040: 1.		
HEAAN18	932383	116	78 - 227	2803			H0369: 2		
HEAAQ66	653242	117	168 - 401	2804			H0369: 2		
HEAAT36	531348	118	114 - 488	2805		Phe-71 to Gln-78, Lys-87 to His-95.	L0748: 3, H0369: 1 and H0031: 1.		
HEAAT60	733632	119	121 - 471	2806		Gly-12 to Ile-18.	H0369: 2		
HEAAV10	968200	120	99 - 236	2807			H0369: 2		
HEAAV33	574508	121	219 - 449	2808		Asp-25 to Glu-30, Leu-39 to Val-48.	H0369: 2 and L0747: 1.		
HEDAE67	752875	122	1 - 147	2809		Ser-5 to Tyr-19, Arg-22 to Thr-32.	H0534: 4 and H0533: 3.		
HEEAD64	741305	123	1 - 159	2810		Glu-21 to Lys-30,	H0549: 2		

HEEAH07	851219	124	1 - 150	2811	Gly-33 to Ser-39.			
HEEAJ58	785121	125	246 - 1	2812	Pro-44 to Phe-50.	H0549: 2		
					Lys-25 to Gly-34, Pro-42 to Trp-57, Lys-71 to Asp-82.	H0549: 2		
HEEAJ76	887321	126	3 - 332	2813		AR054: 10, AR051: 9, AR050: 8 H0549: 2		
HEEAK22	673904	127	140 - 253	2814	Gly-24 to Leu-30.	H0549: 2		
HEEAK84	780838	128	167 - 283	2815	Glu-12 to Gln-19.	H0549: 2		
HEEAL31	887312	129	3 - 203	2816	Val-19 to Ser-25, Arg-39 to Ser-60.	H0369: 2 and H0549: 2.		
HEEAN24	676721	130	1 - 147	2817		H0549: 2		
HEEAS58	735620	131	3 - 278	2818	Ala-76 to Gly-84.	H0549: 2		
HEEAU79	706935	132	1 - 228	2819	Ala-17 to Gly-30, Arg-39 to Trp-46.	H0549: 2 and L0600: 1.		
HEEAW01	851213	133	55 - 195	2820	Lys-12 to Trp-17.	H0549: 2		
HEEAW13	656299	134	28 - 168	2821	Phe-27 to Trp-32.	H0549: 2		
HEGAA24	676716	135	1 - 204	2822	Gly-1 to Glu-10, Gly-41 to Val-47.	H0550: 2		
HEGAA73	767284	136	150 - 425	2823	Ser-52 to Trp-58.	H0550: 2		
HEGAB84	823900	137	1 - 351	2824	Ile-30 to Gly-36, Thr-67 to Thr-72.	AR089: 13, AR061: 8 H0618: 2 and H0550: 1.		
HEGAC69	754344	138	281 - 475	2825	Ser-48 to Lys-54.	H0550: 2 and L0750: 1.		
HEGAC95	965183	139	113 - 355	2826		H0550: 1 and H0328: 1.		
HEGA182	955291	140	1 - 330	2827	Ala-51 to Glu-60,	H0550: 1, H0644: 1		

HEGAK04	887299	141	54 - 305	2828	Pro-88 to Ser-104. Ala-29 to Lys-51, Arg-69 to His-75.	and L0659: 1. AR054: 16, AR051: 5, AR050: 3 H0550: 2 and L0749: 1.		
HEGAO83	780837	142	3 - 326	2829	Lys-1 to Ser-52.	AR089: 9, AR061: 7 H0550: 1 and H0253: 1.		
HEGAP06	934705	143	3 - 254	2830	Asn-4 to Asn-10, Gly-14 to Asp-21, Leu-26 to Gly-39.	L0754: 4, L0776: 2, L0743: 2, L0750: 2, L0779: 2, H0550: 1, L0769: 1 and H0658: 1.		
HEGAP31	697419	144	59 - 319	2831	Gly-1 to Gly-10, Glu-46 to Ser-52, Pro-61 to Pro-67, Arg-69 to Asp-75, Ser-82 to Ser-87.	H0550: 2		
HEGAP36	706951	145	117 - 239	2832	Tyr-36 to Thr-41.	H0550: 2		
HEGAR53	719387	146	462 - 644	2833	Val-1 to Leu-6, Arg-13 to Phe-18.	H0550: 1, H0212: 1, L0745: 1 and L0746: 1.		
HEGAY32	699906	147	1 - 195	2834	Leu-22 to Ser-28, Lys-36 to Lys-43, His-56 to Pro-65.	H0550: 2		
HEGAY52	726316	148	1 - 204	2835	His-32 to Ttp-37, Pro-39 to Thr-53.	H0550: 2		
HEGAZ61	950033	149	12 - 560	2836	Leu-45 to Lys-50, Gln-55 to Glu-74, Thr-114 to Ile-119.	AR050: 66, AR054: 55, AR051: 37, AR089: 11, AR061: 6 H0549: 1 and H0550: 1.		

HEPA44	509456	150	91 - 204	2837	Ala-6 to Gln-12.	H0150: 2		
HEPAB70	557149	151	90 - 353	2838	Ser-7 to Asp-20, Thr-30 to Phe-41, Gly-55 to Gly-61.	H0150: 2		
HEPAD09	888726	152	3 - 176	2839	Ala-20 to Gln-36, Pro-38 to Asn-50.	AR050: 154, AR051: 146, AR054: 141 H0150: 3	16q24.3	155555, 155555, 227650, 253000, 602783
HEPAD40	509002	153	132 - 257	2840		H0150: 2		
HEPAD82	509452	154	3 - 113	2841	Ile-14 to Leu-22.	H0150: 3 and L0763: 1.		
HEPAJ70	586843	155	1 - 75	2842	His-1 to Thr-9.	H0150: 2	9q34.2-q34.3	120215, 120215, 190198
HEPAK01	518331	156	73 - 309	2843	Asn-1 to Lys-7, Leu-27 to His-32, Arg-34 to Pro-50.	H0150: 2		
HEPAK41	925146	157	284 - 583	2844	Pro-4 to Arg-13, Val-34 to Asp-40.	H0549: 1, H0150: 1, L0761: 1 and L0764: 1.		
HEPAM29	508706	158	2 - 154	2845	Ser-9 to Leu-20, Thr-38 to Thr-44.	H0150: 2		
HEPAN19	508694	159	250 - 360	2846	Leu-13 to Lys-21.	L0758: 3, H0150: 2, L0803: 1 and L0779: 1.		
HEPAP02	926914	160	3 - 167	2847		H0150: 2	2p12	147200, 178640, 216900
HEPAP12	968771	161	105 - 284	2848		H0150: 2		
HEPAS44	884083	162	3 - 260	2849		H0150: 2, L0369: 1		

HEPBA39	919875	163	3 - 518	2850	His-1 to Met-10.	and L0532: 1. AR061: 44, AR089: 13 H0150: 10, H0549: 5, H0176: 1, L0790: 1 and L0779: 1.		
HEPBB24	508684	164	42 - 179	2851		H0150: 3		
HEPBB60	855597	165	72 - 323	2852		H0150: 4		
HEPBG26	967921	166	4 - 204	2853		H0150: 2		
HEPBG35	508686	167	92 - 229	2854	Asp-15 to Gly-21, Gln-32 to Lys-45.	H0150: 2 and L0717: 1.		
HEPBH28	508673	168	171 - 290	2855	Glu-7 to Gln-12.	H0150: 2, L0809: 1, L0731: 1 and L0758: 1.		
HEPBH38	707524	169	99 - 257	2856		H0150: 2		
HEPBH45	508696	170	193 - 312	2857		H0150: 3		
HEPBO69	888697	171	112 - 216	2858		H0150: 5		
HEPBQ47	713836	172	91 - 291	2859	Pro-4 to Ser-12.	H0150: 2		
HEPBQ69	888693	173	272 - 460	2860	His-25 to Ile-31.	AR050: 7, AR054: 1 H0150: 3		
HEPBS10	968665	174	123 - 296	2861	Ala-1 to Asp-7.	H0150: 2		
HEPBX43	715685	175	2 - 445	2862	Pro-12 to Gly-22.	H0549: 2 and H0150: 2.		
HEPCD36	523670	176	37 - 297	2863	Asp-18 to Thr-28.	H0150: 2 and H0165: 1.		
HEPCE25	529343	177	2 - 121	2864		H0150: 2		
HEPCO59	761094	178	19 - 117	2865		H0150: 2		
HEPCT32	947081	179	227 - 685	2866	Ser-20 to Lys-30, Ala-43 to Ser-48, Ser-65 to Thr-72, Thr-112 to Thr-118,	AR051: 15, AR054: 2, AR050: 0 H0150: 4, H0038: 3, L0758: 3 and L0779: 2.		

HEPCU32	931824	180	448 - 975	2867	Ala-139 to Arg-147. Arg-57 to Arg-64, Arg-106 to Arg-116, Gln-128 to Pro-135.	AR051: 9, AR054: 8, AR050: 1, AR061: 0, AR089: 0 H0150: 2, H0270: 1, H0032: 1, H0212: 1 and L0779: 1.			
	946975	2652	345 - 872	5339	Arg-57 to Arg-64, Arg-106 to Arg-116, Gln-128 to Pro-135.				
HEQAE65	911438	181	2 - 160	2868	Pro-11 to Gly-16, Gln-37 to Gln-43.	AR089: 1, AR061: 0 H0544: 1 and H0435: 1.			
HEQAH70	699690	182	1 - 186	2869		H0544: 1 and H0038: 1.	5p13	108962, 120940, 217050, 217050, 217070, 245050, 600837, 600946, 600946, 600946	
HEQAO76	769973	183	86 - 436	2870	Ser-3 to Phe-65, Glu-78 to Ala-91, Ala-95 to Ser-116.	H0544: 2	7		
HEQAZ52	727051	184	10 - 180	2871		H0544: 2 and L0748: 2.			
HEQBA41	712243	185	80 - 529	2872	Pro-1 to Glu-15, Pro-29 to Val-35.	H0544: 1 and H0038: 1.			

HETAD29	509311	186	3 - 89	2873	Asn-13 to Cys-19.	H0046: 2	
HETAF20	509308	187	61 - 273	2874	Pro-22 to Gln-32.	H0046: 3	
HETAF49	509306	188	63 - 362	2875	Lys-1 to Val-24, Val-27 to Leu-32.	H0046: 2 and L0748: 2.	
HETAF89	509300	189	3 - 248	2876		H0046: 2	
HETAH16	942612	190	1 - 348	2877	Asn-1 to Gly-13, Val-23 to Ser-28, Ala-52 to Thr-63, Asp-75 to Thr-80.	H0046: 3	
HETAH66	799665	191	161 - 364	2878	Lys-14 to Pro-22.	H0046: 6	
HETAH67	535390	192	128 - 226	2879		H0046: 4	
HETAJ26	508994	193	3 - 164	2880	Ser-20 to Pro-25.	H0046: 2	
HETAK75	518156	194	3 - 290	2881		H0046: 2	
HETAN20	535359	195	2 - 202	2882		H0046: 4	
HETAP59	509118	196	162 - 305	2883	Gln-15 to Ser-21.	H0046: 3	
HETAP94	960392	197	17 - 136	2884	Pro-13 to Gln-22, Arg-24 to Cys-30, Thr-35 to Lys-40.	H0046: 5	
HETAR06	960839	198	2 - 313	2885	Ile-18 to Gln-23, Ser-36 to Ser-41.	H0046: 3	
HETAR60	934444	199	1 - 162	2886		H0046: 3	
HETAT83	918730	200	634 - 801	2887		H0046: 58 and H0616: 1.	
HETAZ13	536192	201	156 - 275	2888	Arg-35 to Glu-40.	H0046: 1 and S0004: 1.	
HETBA01	509189	202	33 - 203	2889		H0046: 2	
HETBF45	508655	203	1 - 138	2890		H0046: 2	
HETBH48	720853	204	81 - 257	2891	Asp-11 to Gln-18, Pro-38 to Ser-43.	H0046: 3	
HETBR25	509099	205	3 - 311	2892	Phe-1 to Ser-6,	H0046: 2 and L0741:	

						Arg-26 to Lys-31, Arg-54 to Ser-59.	1.			
HETBW39	523046	206		3 - 125	2893	Thr-3 to Thr-9, Ala-24 to Cys-29.	H0046: 2			
HETCE12	971505	207		354 - 647	2894		H0046: 5, L0748: 2 and L0527: 1.			
HETCE55	508666	208		143 - 307	2895	Gly-20 to Gly-27.	H0046: 3 and L0748: 1.			
HETCG63	841924	209		542 - 1249	2896	Asn-1 to Ile-20, Tyr-29 to Lys-41, Thr-68 to Gln-74, Asp-88 to Tyr-101, Lys-108 to Cys-116, Thr-136 to Thr-145, Thr-158 to Cys-171, Ser-183 to Pro-188.	H0046: 68, S0013: 2, H0369: 1, H0431: 1, H0013: 1, H0156: 1 and S0014: 1.			
HETCH92	921390	210		121 - 204	2897		H0046: 2			
HETCL55	522829	211		31 - 201	2898	Ala-32 to Pro-57.	H0046: 2			
HETDA81	525412	212		119 - 361	2899	Thr-56 to Pro-62, Asp-76 to Gly-81.	H0046: 2 and H0648: 1.			
HETDD18	509110	213		149 - 283	2900	His-3 to Asn-10.	H0046: 3			
HETDE67	883018	214		107 - 364	2901	Lys-25 to Asn-35.	H0046: 1 and H0615: 1.			
HETDE86	855509	215		54 - 398	2902	Tyr-1 to Ala-9.	H0046: 3 and L0617: 1.	22q11.2	123620, 138720, 145410, 231950, 239500, 275350, 600850	



HETDG67	960870	216	446 - 652	2903		H0046: 10 and S0152: 1.		
HETDI03	925489	217	1 - 159	2904	Asn-1 to Arg-14.	H0046: 2		
HETDL92	508990	218	146 - 274	2905		H0046: 2		
HETDN90	695021	219	131 - 235	2906	Leu-1 to Ser-6.	H0046: 2		
HETDP21	525407	220	116 - 295	2907		H0031: 2 and H0046: 1.		
HETDT15	660714	221	191 - 397	2908		H0046: 2 and L0756: 1.		
HETDW59	827093	222	180 - 281	2909		H0046: 2		
HETEB68	917400	223	39 - 248	2910	His-7 to Thr-22.	H0046: 9		
HETEQ16	952297	224	1 - 273	2911	Arg-1 to Ile-29.	H0046: 5		
HETEZ43	529591	225	189 - 359	2912	Asn-8 to Trp-15, Leu-20 to Ser-32.	H0046: 2	Xq26.1	300123, 301201, 301845, 301900, 304340, 307150, 307700, 308000, 308000, 309000, 310490, 313850
HETFA40	523112	226	195 - 476	2913	Asn-1 to Asp-10, Asp-25 to Gly-30, Asp-45 to Asp-56.	H0046: 3		
HETFC82	799658	227	1 - 543	2914		H0046: 5 and L0665: 1.		

HETFE48	974351	228	283 - 510	2915			H0046: 14		
HETFG29	795274	229	275 - 643	2916		Ala-22 to Tyr-27, Val-58 to Arg-75, Ala-82 to Gly-88, Pro-97 to Gln-102, Val-109 to Asp-117.	H0046: 3, H0618: 1, H0038: 1 and H0616: 1.		
HETFI24	954104	230	430 - 1149	2917		Arg-1 to Lys-6, Glu-8 to Ser-15, Leu-17 to Leu-24, Gln-26 to Gln-46, Ala-58 to Gln-63, Gln-68 to Leu-74, Lys-82 to Arg-95, Glu-101 to Pro-107, Leu-139 to Lys-147, Glu-176 to Leu-186, Arg-208 to Ile-215.	H0046: 53, H0616: 1 and L0664: 1.		
HETFI81	523398	231	66 - 239	2918			H0046: 2		
HETFL39	973697	232	208 - 405	2919		Gln-42 to Gly-48.	H0046: 2		
HETFM43	973702	233	88 - 339	2920		Lys-6 to His-12, Gly-20 to Gly-40, Gly-55 to Glu-69.	H0046: 9		
HETGH30	527929	234	2 - 127	2921		Asn-9 to Gly-17.	H0046: 2		
HETGI40	505383	235	1 - 63	2922		Gly-6 to Asn-21.	H0046: 2		
HETGL62	523372	236	2 - 154	2923			H0046: 2 and L0771: 1.		
HETGL74	947978	237	3 - 581	2924			AR050: 47, AR051: 46, AR054: 39, AR089: 4, AR061: 2 H0046: 4		

HETGN20	927789	238	7 - 567	2925		H0046: 2 and L0519: 2.		
HETGQ76	542486	239	23 - 190	2926	Pro-4 to Lys-11.	H0046: 2		
HETGS09	969632	240	11 - 109	2927		H0046: 2		
HETHD30	935175	241	151 - 441	2928	Arg-1 to Pro-7, Pro-13 to Ser-18, Ala-51 to Ser-64, Asn-92 to Lys-97.	H0046: 9		
HETHE56	974348	242	101 - 259	2929		H0046: 4		
HETHH49	967737	243	490 - 639	2930		H0046: 4		
HETHO63	745503	244	90 - 428	2931		H0046: 1, H0032: 1 and L0740: 1.		
HETHO78	963592	245	475 - 660	2932	Ser-12 to Val-20.	H0046: 5		
HETHR24	851412	246	24 - 461	2933	Pro-1 to Arg-7, Thr-18 to Thr-29, Arg-35 to Ser-50, His-87 to Cys-92.	AR089: 1, AR061: 0 H0046: 2		
HETHS53	974555	247	302 - 439	2934		H0046: 3		
HETTF01	966185	248	47 - 223	2935		H0046: 3		
HETIG71	974359	249	262 - 411	2936	Ser-3 to Pro-10.	H0046: 3		
HETU84	766589	250	1 - 363	2937	Ala-60 to Lys-67, Gln-71 to Gly-76.	H0046: 14		
HETU85	883991	251	1 - 135	2938	Glu-7 to Glu-12.	H0046: 2		
HETIQ89	764951	252	81 - 245	2939	Ile-3 to His-12.	H0046: 2		
HETIU60	739804	253	458 - 646	2940		H0046: 3		
HETTY84	935947	254	62 - 166	2941	Arg-16 to Asn-21.	H0046: 2		
HETJD30	974558	255	252 - 503	2942	Pro-49 to Thr-57.	H0046: 18		
HETJD86	909130	256	3 - 215	2943	Pro-14 to Pro-19, Cys-35 to Ser-40.	H0046: 5 and L0766: 1.		

HETJG63	950017	257	94 - 462	2944	Val-10 to Asp-15.	AR061: 4, AR089: 2 H0046: 2 and H0616: 1.		
HETJ132	806435	258	262 - 552	2945		L0375: 3, H0046: 2, L0774: 1 and L0789: 1.		
HETJK67	751072	259	173 - 433	2946	Ser-1 to Thr-7.	H0046: 2		
HETJN51	767932	260	26 - 274	2947		H0046: 2		
HETJT95	789310	261	222 - 413	2948	Lys-8 to Thr-23.	H0046: 3		
HETJX04	927120	262	3 - 704	2949	Asp-11 to Val-21, Pro-27 to Thr-43, Trp-92 to Lys-97, Pro-136 to Gly-149, Met-182 to Val-193, Thr-197 to Asn-203.	AR089: 4, AR061: 2 H0046: 1, H0032: 1, H0040: 1 and L0565: 1.		
HETJY11	966194	263	254 - 481	2950		H0046: 4 and L0774: 1.		
HETKA38	894600	264	3 - 308	2951	Val-50 to Arg-63, Asp-75 to Trp-89, Pro-92 to Arg-98.	H0046: 3 and H0616: 1.		
HETKG67	974355	265	321 - 527	2952		H0046: 11	17	
HETKH01	915320	266	20 - 226	2953		H0046: 3		
HETKH92	790910	267	1 - 210	2954	Pro-1 to Gly-14, Gly-17 to Ser-23, Ser-25 to Arg-34.	H0046: 2		
HETKM55	974362	268	31 - 267	2955	Ser-12 to Arg-18, Gln-69 to Met-74.	H0046: 17		
HETKQ65	855449	269	3 - 353	2956	Leu-33 to His-38, Pro-56 to Glu-61, Pro-111 to Leu-117.	H0046: 3		

HETKV26	910030	270	2 - 664	2957	Asp-12 to Trp-20.	AR061: 1, AR089: 0 H0046: 2		
HETKX91	789797	271	150 - 254	2958	Leu-22 to Arg-28.	H0046: 2		
HETKZ65	941045	272	3 - 620	2959	Gln-1 to Glu-20.	H0046: 2		
HETLB04	920894	273	518 - 1333	2960	Glu-1 to Gly-6, Val-21 to Asp-27.	H0046: 6 and H0616: 1.		
HETLH89	786458	274	2 - 250	2961	Cys-22 to Asp-27.	H0046: 2		
HETLM46	974361	275	111 - 314	2962	His-1 to Leu-8, Lys-10 to Leu-17, Met-44 to Cys-49.	H0046: 3		
HJMAE34	957079	276	3 - 305	2963		H0545: 2		
HJMAZ84	919847	277	39 - 335	2964		H0545: 2		
HJMBT23	858254	278	610 - 155	2965	Asp-53 to Gln-59, Asp-122 to Leu-128.	H0545: 2, L0766: 1, L0775: 1, L0383: 1, L0742: 1 and L0747: 1.		
HLMNG77	675752	279	103 - 252	2966	Arg-11 to Ser-19.	H0618: 6, L0758: 3, H0484: 1, H0255: 1, H0549: 1, H0253: 1, H0616: 1, L0794: 1, L0774: 1 and L0779: 1.		
HLWAB50	856552	280	167 - 367	2967	Tyr-23 to Ser-30.	H0553: 2		
HLWAD08	958554	281	146 - 295	2968	Asn-34 to Leu-40.	H0553: 2, L0441: 1 and H0672: 1.		
HLWAG51	964389	282	588 - 989	2969	Ser-84 to Ile-92, Glu-104 to Gly-111.	L0754: 20, L0748: 10, L0749: 10, H0553: 8, L0755: 8, H0031: 7, H0644: 6, H0030: 2, L0142: 1, L0771: 1, L0759: 1 and H0008: 1.		

HLWAH41	944774	283	13 - 771	2970	Arg-9 to Val-17, Pro-25 to Gly-30.	AR061: 2, AR089: 2 L0748: 6, L0752: 5, H0553: 2, L0754: 2, L0749: 1 and L0780: 1.		
	948953	2653	687 - 286	5340	Gly-1 to Ser-6, Phe-12 to Trp-25, Ala-31 to Gly-42, Met-44 to Gln-49.			
HLWAI13	920690	284	158 - 376	2971		L0754: 2, H0553: 1, H0670: 1 and L0749: 1.		
HLWAJ64	746460	285	381 - 145	2972		H0553: 2		
HLWAK69	694216	286	118 - 333	2973	Asn-12 to Ala-18, Gly-61 to Ser-70.	H0553: 1, H0435: 1 and L0748: 1.		
HLWAK94	715727	287	330 - 175	2974		H0553: 2, L0536: 2, L0754: 2 and H0030: 1.		
HLWAR77	947484	288	1287 - 292	2975	Gln-97 to Pro-114, Trp-117 to Lys-129, Thr-166 to Gln-173, Ser-178 to Lys-183, Glu-250 to Phe-256, Ser-295 to His-301, Tyr-307 to Gln-316, Glu-322 to Ser-330.	AR050: 21, AR054: 9, AR051: 3, AR089: 1, AR061: 1 H0553: 4 and L0759: 2.		
HLWAR78	723330	289	430 - 2	2976	Ser-20 to Gly-27, Gln-29 to Arg-41, Ser-46 to Pro-53.	H0553: 2, H0030: 1 and L0755: 1.		
HLWAU18	666273	290	4 - 390	2977	Arg-112 to Ser-117.	H0553: 2		
HLWBA11	966796	291	192 - 350	2978		H0553: 2		
HLWBA25	677944	292	1 - 192	2979	Lys-28 to Arg-39.	H0553: 2, L0005: 1, L0143: 1, L0749: 1 and		

HLWBE31	934562	293	1 - 150	2980	Val-2 to Pro-8, Arg-21 to Trp-29, Thr-41 to Arg-50.	L0755: 1. H0553: 2		
HLWBE92	791362	294	252 - 1	2981	Leu-6 to Gln-11, Arg-46 to Asp-52, Glu-68 to Pro-73.	H0030: 1 and H0553: 1.		
HLWBJ02	919639	295	90 - 380	2982	Ala-3 to Trp-10.	H0553: 2		
HLWBK40	711000	296	78 - 224	2983		H0553: 3		
HLWBN49	713600	297	847 - 1062	2984	Arg-11 to His-20, Pro-23 to Gly-31.	L0748: 14, H0553: 4, L0754: 4, H0644: 3, H0031: 2, L0005: 1, L0774: 1, S0454: 1, L0749: 1 and L0780: 1.		
HLWBO68	529323	298	119 - 199	2985	Gly-1 to Glu-6, Val-8 to Tyr-16.	H0328: 2 and H0553: 1.		
HLWBQ84	782938	299	3 - 263	2986	Lys-1 to Lys-41, Pro-75 to Ser-86.	AR089: 1, AR061: 0 H0553: 2		
HLWBQ86	703465	300	109 - 279	2987	Met-36 to Lys-41.	H0553: 3		
HLWBS14	925300	301	272 - 48	2988	Ala-37 to Glu-48.	H0328: 1 and H0553: 1.		
HLWBS43	774175	302	2 - 268	2989	Glu-57 to Gly-66.	H0553: 2		
HLWBZ74	679215	303	184 - 2	2990	Asn-7 to Cys-15.	H0030: 1, H0553: 1 and L0754: 1.		
HLWCA67	577929	304	114 - 848	2991	Pro-26 to Ser-39, Ile-66 to Ser-78, Lys-84 to Pro-105, Pro-171 to Pro-181, Arg-194 to Ala-199.	H0031: 2, L0754: 2, H0553: 1, L0743: 1, L0748: 1 and L0747: 1.		

HLWCM44	727699	305	57 - 314	2992	Ala-17 to Thr-24.	H0553: 2		
HLWCM70	926850	306	207 - 329	2993		H0553: 2	3p24-p22	116806, 168468, 182280, 190182, 190182, 227646, 261510, 600163, 601154
HLWCO66	750779	307	71 - 208	2994	Gln-16 to Met-21, Val-25 to Lys-33, Ala-40 to Arg-46.	H0553: 2		
HLWCQ53	869700	308	160 - 348	2995	Ser-11 to Gly-17.	H0553: 2 and L0754: 1.		
HLWCQ62	742778	309	329 - 114	2996	Pro-10 to Lys-16.	H0615: 3, H0553: 2, L0756: 2 and L0758: 2.		
HLWCQ76	768018	310	2 - 154	2997		H0553: 2, L0656: 1, L0659: 1, L0666: 1, L0664: 1 and L0748: 1.		
HLWDA01	913768	311	2 - 463	2998	Ile-31 to Ser-40, Arg-115 to Gly-122.	H0553: 2		
HLWDB18	790969	312	1 - 702	2999	Ser-21 to Glu-27, Gln-50 to Pro-59, Gln-61 to Ser-66, Thr-68 to Pro-74, Pro-77 to Gln-84.	H0553: 2, H0038: 1, L0764: 1, L0794: 1 and L0438: 1.		
HLWDD02	953283	313	3 - 149	3000		H0553: 2		
HLWDE60	868276	314	148 - 426	3001	Tyr-8 to Arg-14, Asn-40 to His-46,	H0553: 2		



						Val-56 to Thr-62.				
HLWDL71	759843	315	1 - 51	3002		Pro-1 to Gly-12.		H0553: 2		
HLWEE76	973315	316	2 - 157	3003		Thr-18 to Met-25.		H0553: 2		
HLWFG82	929647	317	1 - 558	3004		Pro-4 to Pro-18, Gly-81 to Pro-87, Ala-110 to Ala-118, Gln-127 to Gly-143, Arg-168 to Asp-176.		AR054: 2, AR051: 1, AR089: 1, AR050: 1, AR061: 0 H0651: 59, L0751: 5, L0438: 4, L0774: 3, L0439: 3, L0748: 2, L0779: 2, L0752: 2, L0755: 2, L0595: 2, H0295: 1, H0009: 1, T0010: 1, H0553: 1, H0617: 1, H0163: 1, H0102: 1, H0494: 1, L0770: 1, L0662: 1, L0375: 1, L0806: 1, L0776: 1, L0657: 1, L0659: 1, L0792: 1, L0666: 1, L0663: 1, L0664: 1, L0665: 1, L0352: 1, H0648: 1, L0740: 1, L0749: 1, L0757: 1, L0361: 1, L0603: 1 and S0042: 1.		
HLWFQ04	856488	318	1 - 402	3005		Phe-20 to Gly-26, Ser-30 to Ser-37.		H0553: 2		
HMVDU41	957804	319	2 - 289	3006		Ser-37 to Ala-46, Cys-77 to Ser-85.		H0651: 29 and S0212: 1.		
HNBTP01	914428	320	3 - 512	3007				H0662: 2, H0670: 1, 22q13.1-q13.2	103050,	

							L0756: 1 and L0759: 1.		103050, 124030, 124030, 138981, 182380, 188826, 190040, 190040, 190040
HNBTT79	965424	321	3 - 194	3008	Pro-12 to Ser-24, Thr-42 to Ser-47, Pro-52 to Trp-59.		H0662: 2		
HNBTX52	965428	322	52 - 339	3009			H0662: 2		
HNBUM19	933672	323	209 - 472	3010			H0662: 2		
HNBUR07	951814	324	203 - 412	3011	Lys-8 to Asn-14, Lys-48 to Asp-53.		H0662: 2		
HNGAO08	958685	325	300 - 115	3012			H0651: 177, L0794: 5, L0766: 5, H0657: 3, L0526: 2, L0666: 2, L0664: 2, L0744: 2, L0759: 2, S0212: 1, S0360: 1, H0587: 1, H0052: 1, H0050: 1, H0266: 1, H0428: 1, H0551: 1, H0412: 1, L0475: 1, H0646: 1, L0761: 1, L0662: 1, L0803: 1, L0805: 1, L0809: 1, L0665: 1, S0052: 1, S0374: 1,		

	959068	2654	81 - 284	5341	Ile-1 to Asp-7, Asn-39 to Pro-46.	H0690: 1, H0659: 1, H0648: 1, H0521: 1, L0786: 1, L0779: 1, L0777: 1, L0780: 1, L0755: 1, H0543: 1 and S0424: 1.		
HNNNA06	917723	326	340 - 696	3013	Glu-15 to Asp-21, His-32 to His-45, Gly-55 to Lys-64, Gly-81 to Ser-88.	AR054: 7, AR050: 1, AR051: 0 H0678: 47, L0748: 12, L0754: 7, L0747: 6, L0755: 5, L0776: 4, L0740: 4, L0749: 4, L0759: 3, H0553: 2, L0665: 2, L0779: 2, S0282: 1, H0057: 1, H0674: 1, H0616: 1, H0646: 1, L0770: 1, L0769: 1, L0646: 1, L0765: 1, L0773: 1, L0777: 1, L0731: 1 and L0596: 1.	2q35	118800, 123660, 125660, 125660, 193500, 193500, 193500, 193500, 201460, 205100, 237300, 262000, 600266, 601277
HNNNA09	917724	327	320 - 520	3014	Glu-15 to Asp-21, His-32 to His-45.	H0678: 47, L0748: 12, L0754: 7, L0747: 6, L0755: 5, L0776: 4, L0740: 4, L0749: 4, L0759: 3, H0553: 2, L0665: 2, L0779: 2, S0282: 1, H0057: 1,	2q35	118800, 123660, 125660, 125660, 193500, 193500, 193500,

							H0674: 1, H0616: 1, H0646: 1, L0770: 1, L0769: 1, L0646: 1, L0765: 1, L0773: 1, L0777: 1, L0731: 1 and L0596: 1.			193500, 201460, 205100, 237300, 262000, 600266, 601277
HNNA77	917725	328	771 - 1019	3015			H0678: 2	2q35		118800, 123660, 125660, 125660, 193500, 193500, 193500, 201460, 205100, 237300, 262000, 600266, 601277
HNOAS06	933730	329	525 - 752	3016	Asp-28 to Ala-37, Arg-49 to Gly-58, Ala-63 to Asn-69.		H0618: 3, L0758: 3, L0794: 2, L0748: 2, L0779: 2, L0755: 2, L0731: 2, L0770: 1, H0651: 1 and L0603: 1.			
HNOAX12	969363	330	231 - 524	3017	Pro-76 to Cys-88.		H0651: 8, L0744: 2, L0598: 1 and L0756: 1.			
HNOBF57	927903	331	101 - 475	3018	Ala-2 to Lys-10, Glu-70 to Gln-76.		H0651: 154, L0731: 9, L0777: 6, L0803: 4,			

					L0775: 3, H0196: 2, H0163: 2, L0662: 2, L0805: 2, L0783: 2, L0438: 2, L0740: 2, L0759: 2, H0170: 1, S0444: 1, H0592: 1, H0632: 1, L0471: 1, H0399: 1, H0615: 1, H0040: 1, S0294: 1, H0647: 1, L0598: 1, L0763: 1, L0638: 1, L0637: 1, L0642: 1, L0374: 1, L0767: 1, L0768: 1, L0794: 1, L0804: 1, L0774: 1, L0375: 1, L0776: 1, L0606: 1, L0659: 1, L0809: 1, L0647: 1, L0789: 1, L0791: 1, L0666: 1, L0663: 1, L0664: 1, L0665: 1, H0659: 1, H0658: 1, H0672: 1, S0328: 1, H0539: 1, S0380: 1, L0439: 1, L0779: 1, L0594: 1, L0361: 1, S0026: 1, S0242: 1 and S0460: 1.				
HNOCT39	952611	333	46 - 114	3020	Asn-18 to Lys-23.	H0651: 6			
HNOCT39	952611	333	46 - 114	3020	Asn-18 to Lys-23.	H0651: 6			

HNOCU05	957833	334	536 - 745	3021			H0651: 2		
HOCMU03	922418	335	8 - 220	3022	Asp-9 to Lys-20, Ser-25 to Glu-30, Pro-57 to Asn-63.		H0660: 2		
HOCPI03	917484	336	3 - 185	3023			H0660: 2		
HODAD73	973463	337	91 - 231	3024	Gly-42 to His-47.		H0328: 3		
HODAD95	974043	338	280 - 426	3025			H0328: 2 and H0615: 2.		
HODAG37	529410	339	48 - 236	3026			H0328: 2		
HODAH32	859509	340	70 - 300	3027			H0328: 2 and L0534: 1.		
HODAJ01	921666	341	46 - 321	3028			H0328: 1 and H0615: 1.		
HODAJ35	529405	342	76 - 216	3029			H0328: 2		
HODAK38	529404	343	108 - 311	3030	Pro-10 to Cys-27, Gln-41 to Arg-48.		H0328: 2		
HODAK95	960179	344	147 - 398	3031			L0777: 4, H0328: 2, L0756: 2 and L0803: 1.		
HODAO16	529401	345	3 - 161	3032	Thr-3 to Lys-12.		H0328: 2		
HODAT56	529402	346	21 - 158	3033	Arg-15 to Thr-21, Ser-38 to Glu-44.		H0328: 2		
HODAV80	859519	347	85 - 300	3034			H0328: 2		
HODAW60	692684	348	227 - 328	3035			H0328: 2		
HODAW84	775425	349	142 - 297	3036	Thr-6 to Asp-14.		H0546: 1, H0328: 1, L0779: 1 and L0361: 1.		
HODBC01	921662	350	166 - 303	3037	Gly-2 to Arg-10, Ile-27 to Pro-33.		H0328: 3		
HODBC07	954161	351	158 - 331	3038	Arg-27 to Trp-33.		H0328: 2		
HODBE01	921655	352	18 - 116	3039	Cys-14 to Pro-20.		H0328: 2		

HODBH16	927781	353	3 - 299	3040	Glu-23 to His-30, Leu-41 to Asp-53.	H0328: 2	
HODBO85	859559	354	1 - 168	3041	Lys-13 to Gln-21.	H0328: 2	
HODBT58	678444	355	2 - 166	3042	Ser-39 to Arg-45.	H0328: 2	
HODBU95	529329	356	59 - 280	3043	Glu-10 to Ala-17.	H0328: 2	
HODBV71	761447	357	71 - 343	3044	Ser-22 to Val-41.	H0328: 1, H0059: 1 and L0596: 1.	
HODCA11	967732	358	1 - 180	3045		H0328: 2	
HODCA68	529400	359	2 - 184	3046	Leu-20 to Arg-25, Ser-47 to Gly-53.	H0328: 2	
HODCD05	932218	360	2 - 286	3047	Glu-35 to Ile-40, Pro-73 to Gln-79.	H0328: 1 and H0038: 1.	
HODCH64	529327	361	1 - 123	3048	Glu-1 to Thr-10.	H0328: 2	
HODCI11	967320	362	20 - 175	3049	Gln-44 to Thr-51.	H0328: 2	
HODCI42	932638	363	39 - 242	3050	Tyr-16 to Thr-22.	H0328: 2	
HODCL88	529334	364	1 - 222	3051		H0328: 2 and L0749: 2.	
HODCM62	859556	365	87 - 275	3052	Gln-1 to Ser-7, Arg-15 to Gly-21.	H0328: 2	
HODCO09	573202	366	1 - 168	3053	Lys-27 to Leu-32, Asp-49 to Asp-56.	H0328: 2	
HODCO46	573200	367	2 - 196	3054		H0328: 2	
HODCO82	573195	368	162 - 335	3055		H0328: 2	
HODCP69	507249	369	3 - 185	3056		H0328: 2	
HODCR43	529332	370	122 - 325	3057	Leu-1 to Lys-14.	H0328: 2	
HODCT07	954149	371	127 - 234	3058	Pro-14 to Ile-20, Pro-23 to Pro-28.	H0328: 2	
HODCU01	917270	372	15 - 203	3059	Arg-1 to Pro-12.	H0328: 2	
HODCU02	920698	373	313 - 477	3060	Gly-8 to Thr-22.	H0328: 1 and H0615:	

HODCU62	524314	374	207 - 323	3061	Arg-5 to Cys-11.	1.		
HODCV09	973487	375	382 - 591	3062	Lys-7 to Glu-12.	H0328: 2		
HODCW17	960051	376	156 - 284	3063	Lys-37 to Ser-43.	H0328: 3		
HODCW37	575256	377	80 - 280	3064	Pro-49 to His-59.	H0328: 2		
HODCZ20	859580	378	82 - 273	3065		H0328: 2		
HODDD20	933726	379	56 - 166	3066	Glu-21 to Glu-37.	H0328: 1 and H0615: 1.		
HODDD41	529390	380	3 - 305	3067	Ala-8 to Ala-13, Ile-17 to Gln-26, Phe-52 to Asn-64, Asp-72 to Lys-77.	H0328: 2		
HODDE28	529169	381	137 - 277	3068	Gln-14 to Leu-22, Lys-25 to Lys-35.	H0328: 2 and H0615: 1.		
HODDF51	937759	382	1 - 240	3069		H0328: 2		
HODDG57	806204	383	127 - 468	3070		H0328: 1, H0615: 1 and L0748: 1.		
HODDH52	742217	384	18 - 329	3071	Val-26 to Lys-38, Lys-47 to Lys-53, Lys-60 to Leu-65, Ser-80 to Ile-90.	H0038: 2, H0328: 1 and H0616: 1.		
HODDM21	523270	385	58 - 147	3072	Leu-16 to Arg-30.	H0328: 2		
HODDM25	780472	386	387 - 566	3073		H0328: 1, H0615: 1 and L0748: 1.		
HODDM78	859516	387	83 - 286	3074		H0328: 2		
HODDN40	859518	388	385 - 615	3075	Arg-10 to Arg-17, Ser-24 to Lys-30.	H0328: 1, H0615: 1 and L0758: 1.		
HODDN59	975437	389	391 - 660	3076		H0615: 2 and H0328: 1.		



HODDN93	891236	390	60 - 371	3077		AR054: 28, AR050: 22, AR051: 13 H0328: 1, H0674: 1 and L0754: 1.		
HODDQ02	920962	391	101 - 283	3078		H0328: 2		
HODDQ21	919295	392	3 - 359	3079	Tyr-11 to Gln-16, Ala-24 to Ala-32, Pro-36 to Ser-41.	H0615: 2 and H0328: 1.		
HODDR13	529640	393	48 - 152	3080		H0328: 2		
HODDS67	567197	394	171 - 338	3081		H0328: 2		
HODDU70	529290	395	1 - 357	3082	Gly-1 to Pro-7.	H0328: 2		
HODDX35	531209	396	126 - 275	3083	Leu-9 to Gln-20.	H0328: 2		
HODEA90	782242	397	391 - 534	3084		H0615: 3		
HODEB04	927022	398	1 - 282	3085		H0615: 3		
HODEC76	952204	399	350 - 514	3086		H0615: 2		
HODED11	966085	400	42 - 218	3087	Ile-12 to Thr-20, Tyr-47 to Gly-57.	H0615: 3		
HODED55	859368	401	24 - 296	3088	Thr-34 to Ser-40.	H0615: 2		
HODED87	915909	402	23 - 421	3089	Gln-3 to Arg-14, Pro-30 to Thr-36.	L0776: 2, L0740: 2, H0484: 1, H0615: 1, L0809: 1, L0748: 1, L0750: 1, L0779: 1 and L0752: 1.		
HODEF10	963494	403	235 - 480	3090		H0615: 2		
HODEF87	974342	404	27 - 266	3091		H0615: 3		
HODEG86	784833	405	373 - 648	3092		H0615: 3		
HODEH08	963895	406	2 - 142	3093	Pro-3 to Thr-10, Ser-38 to Pro-47.	H0615: 2		
HODEH22	974329	407	101 - 295	3094		H0615: 3		

HODEI13	859318	408	66 - 227	3095	Ile-9 to Cys-14, Pro-22 to Gly-27.	H0615: 3		
HODEI48	841906	409	511 - 633	3096	Lys-1 to Ser-10.	H0615: 3		
HODEK50	859307	410	363 - 740	3097	Ser-25 to Pro-30, Pro-84 to Glu-92.	H0615: 3		
HODEL92	859313	411	45 - 188	3098		H0615: 2		
HODEN75	772940	412	312 - 458	3099		H0615: 2		
HODEO87	930735	413	1 - 159	3100	Val-9 to Val-15.	H0615: 2		
HODEP04	926984	414	69 - 269	3101		H0615: 2		
HODEP12	965534	415	115 - 381	3102		H0615: 2		
HODEP86	784846	416	215 - 364	3103		H0615: 2		
HODEQ28	972808	417	206 - 331	3104	Thr-1 to Ser-13.	H0615: 3		
HODEQ79	859287	418	246 - 479	3105		H0615: 2		
HODER91	789661	419	1 - 351	3106	Phe-28 to Thr-33, Ile-44 to Thr-54, Arg-78 to Lys-88, Gln-99 to Lys-106.	AR061: 4, AR089: 2 H0651: 709, L0766: 5, L0754: 5, L0756: 3, L0803: 2, L0779: 2, L0777: 2, L0759: 2, S0354: 1, H0643: 1, H0013: 1, H0194: 1, H0545: 1, H0373: 1, H0252: 1, H0615: 1, H0316: 1, H0040: 1, H0641: 1, H0647: 1, S0422: 1, L0598: 1, L0369: 1, L0520: 1, L0762: 1, L0649: 1, L0804: 1, L0527: 1, L0656: 1, H0144: 1, H0702: 1, H0547: 1,		

									H0555: 1, H0436: 1, S0028: 1, L0746: 1, L0750: 1, L0780: 1, L0752: 1 and L0686: 1.			
HODES86	784815	420	3 - 278	3107					L0753: 3, H0615: 1 and H0683: 1.			
HODET03	922988	421	27 - 191	3108				Val-36 to Gly-42.	H0615: 2			
HODEV13	859302	422	433 - 639	3109				Asn-37 to Lys-42.	H0615: 2			
HODEX10	926260	423	22 - 159	3110				Met-1 to Arg-6, Ser-16 to Lys-29.	AR061: 6, AR089: 3 H0615: 5			
HODEX31	922473	424	129 - 524	3111				Pro-19 to Gly-45.	H0615: 2			
HODEY08	972984	425	425 - 667	3112				Glu-1 to Lys-7, Thr-34 to Asn-43.	H0615: 2			
HODEY13	859323	426	179 - 382	3113					H0615: 2			
HODEY80	859296	427	432 - 677	3114				Gln-36 to Gly-41.	H0615: 2			
HODEZ02	918672	428	37 - 207	3115				Leu-27 to Ile-33, Trp-43 to Gln-48.	H0615: 2 and H0328: 1.			
HODEZ11	952166	429	178 - 336	3116					H0615: 2			
HODFA38	934266	430	170 - 397	3117				Ser-9 to Gly-15, Pro-22 to Lys-27, Glu-43 to Glu-56.	H0615: 3 and L0367: 1.			
HODFB05	929733	431	451 - 639	3118					H0615: 2			
HODFB57	972810	432	2 - 217	3119				Thr-1 to Ser-16.	H0615: 2			
HODFB88	792979	433	449 - 634	3120					H0615: 2			
HODFD08	958371	434	133 - 270	3121					H0615: 2			
HODFD10	963516	435	325 - 465	3122					H0615: 2			
HODFD45	780531	436	169 - 399	3123					H0615: 2			
HODFE69	859338	437	2 - 301	3124				Arg-46 to Ser-57, Thr-67 to Cys-78.	H0615: 2			

HODFG37	782219	438	263 - 433	3125		H0615: 2		
HODFH02	915257	439	33 - 164	3126	Gln-15 to Ser-23, Gly-30 to Lys-36.	H0615: 3		
HODFH76	783783	440	143 - 391	3127	Lys-32 to Ser-37.	H0615: 2		
HODFJ01	859549	441	247 - 501	3128		H0328: 1 and H0615: 1.		
HODFK18	974313	442	44 - 343	3129	Ala-14 to Ser-38.	H0615: 5 and L0665: 2.		
HODFK94	974318	443	42 - 182	3130	Ser-7 to Lys-15, Val-17 to Pro-29.	H0615: 3		
HODFL91	918456	444	1 - 159	3131	Pro-45 to Cys-51.	H0615: 2		
HODFN19	859334	445	198 - 425	3132		H0615: 2		
HODFN42	921529	446	79 - 318	3133		H0328: 1 and H0615: 1.		
HODFO03	859329	447	124 - 309	3134	Asp-1 to Asp-7.	H0615: 3 and H0328: 2.		
HODFO37	859314	448	85 - 306	3135	Trp-44 to Thr-54.	H0615: 2		
HODFP40	921651	449	587 - 817	3136	Tyr-4 to Thr-11, Thr-15 to Asp-20, Arg-29 to Leu-42.	H0328: 1, H0615: 1, L0775: 1, H0648: 1 and L0758: 1.		
HODFQ02	918637	450	427 - 615	3137	Tyr-1 to Cys-14, Gln-20 to Ile-47.	H0615: 3		
HODFQ06	934304	451	258 - 401	3138	Thr-1 to Asn-6.	H0615: 2		
HODFT52	915232	452	224 - 51	3139		H0615: 2		
HODFU02	918536	453	204 - 398	3140		H0615: 2		
HODFU06	934229	454	460 - 588	3141	Thr-1 to Ser-6.	H0615: 3		
HODFU47	806232	455	274 - 582	3142	Glu-1 to His-6, Phe-13 to Pro-23, Arg-29 to Leu-34,	H0615: 2 and L0558: 1.		

						Pro-54 to Asp-60, Pro-62 to Gly-67.				
HODFU54	965526	456	60 - 134	3143					H0615: 2	
HODFW17	859322	457	370 - 603	3144					H0615: 2	
HODFX57	975259	458	1 - 183	3145					H0615: 3	
HODFY16	958329	459	163 - 309	3146					AR061: 6, AR089: 3 H0615: 2 and L0766: 1.	
HODFY79	975253	460	393 - 259	3147					H0615: 3	
HODFZ11	965104	461	45 - 209	3148					H0615: 2 and H0169: 1.	
HODGC04	926863	462	83 - 214	3149		Glu-9 to Gln-21.			H0615: 2	
HODGC61	973449	463	43 - 324	3150		Thr-50 to Gln-57.			AR061: 8, AR089: 5 H0615: 3	
HODGD05	931071	464	1 - 147	3151		Ala-8 to Gln-29, Ser-36 to Gly-44.			H0615: 2	
HODGH02	917969	465	28 - 285	3152		His-8 to Gly-18, Leu-37 to Lys-42.			H0615: 2	
HODGH04	926255	466	10 - 159	3153		His-8 to Gly-18, Gly-26 to Arg-33.			H0615: 2	
HODGH07	951933	467	178 - 330	3154					H0615: 2	
HODGH11	965105	468	383 - 556	3155					H0615: 2	
HODGH91	968794	469	91 - 333	3156		Arg-30 to Asn-35.			H0328: 1 and H0615: 1.	
HODGI08	958235	470	1 - 267	3157		Arg-11 to Thr-29.			H0615: 2	
HODGJ67	974297	471	3 - 353	3158		Ser-2 to Thr-13, Ile-16 to Ser-26, Pro-28 to Gln-36, Gln-41 to Pro-47.			H0615: 3	

HODGL54	859303	472	402 - 698	3159	Pro-25 to Ser-31.	H0615: 4 and H0328: 1.		
HODGM46	974051	473	2 - 304	3160	Phe-81 to Phe-87.	H0615: 3		
HODGO46	883087	474	292 - 525	3161		H0615: 2		
HODGP37	974293	475	67 - 228	3162		H0615: 3		
HODGP83	889967	476	3 - 236	3163		H0615: 2		
HODGP95	908650	477	23 - 358	3164	Lys-38 to Arg-44, Thr-84 to Asp-99.	AR089: 8, AR061: 3 H0615: 2		
HODGQ08	958237	478	261 - 377	3165		H0615: 2		
HODGQ22	974290	479	117 - 245	3166		H0615: 3		
HODGQ32	974294	480	175 - 405	3167	Val-1 to Lys-7, Gln-12 to Arg-18, Arg-22 to Gln-30, Gly-32 to Glu-40.	H0615: 3		
HODGQ92	894368	481	2 - 274	3168	Asp-42 to Arg-47, Gln-84 to Gly-91.	AR061: 5, AR089: 2 H0615: 2		
HODGT62	974052	482	253 - 402	3169		H0615: 3		
HODGW08	958277	483	183 - 371	3170	Ala-11 to Cys-16.	H0615: 2		
HODGX10	963427	484	206 - 310	3171		H0615: 3		
HODGX29	913879	485	138 - 257	3172		H0615: 2 and H0658: 1.		
HODGZ06	933783	486	315 - 479	3173		H0615: 2		
HODGZ10	961977	487	3 - 119	3174		H0615: 2		
HODHC03	922987	488	3 - 341	3175	Pro-59 to Pro-65, Glu-96 to Phe-113.	H0615: 2 and L0777: 1.		
HODHD16	974924	489	132 - 278	3176	Ala-1 to Glu-12.	H0615: 3 and H0328: 1.		
HODHG71	926203	490	190 - 384	3177	Asp-1 to Lys-20, Cys-34 to Ser-42.	H0615: 2		

HODHH82	964935	491	78 - 293	3178	Thr-14 to Arg-22, Ile-25 to Ser-35.	H0328: 1 and H0615: 1.		
HODHI07	952195	492	376 - 636	3179	Glu-33 to Lys-46.	H0328: 1 and H0615: 1.		
HODHI26	973423	493	275 - 451	3180		H0615: 2 and H0328: 1.		
HODHK02	918613	494	108 - 302	3181		H0615: 3		
HODHL19	973433	495	79 - 315	3182		H0615: 3		
HODHL56	847724	496	185 - 415	3183		H0615: 2, H0188: 1 and L0758: 1.		
HODHO11	965529	497	36 - 137	3184		H0615: 2		
HODHS34	965460	498	285 - 461	3185		H0615: 2		
HODHY53	914554	499	47 - 214	3186		H0615: 2		
HODJR03	922484	500	134 - 379	3187		H0615: 3		
HODJY33	951404	501	31 - 384	3188	Lys-30 to Arg-36.	H0615: 3		
HODJZ90	965049	502	41 - 169	3189	Lys-8 to Ser-14.	H0615: 2		
HODKN07	933320	503	92 - 256	3190	His-20 to Val-35.	H0615: 2 and L0060: 1.		
HOFAA15	659522	504	71 - 385	3191	Ile-13 to Arg-20.	H0415: 1 and H0414: 1.		
HOFAB40	964113	505	527 - 99	3192		H0415: 2 and H0414: 1.		
HOFAB71	573337	506	100 - 249	3193		H0414: 2		
HOFAD05	932211	507	118 - 306	3194	Pro-1 to Arg-8, Pro-39 to Glu-56.	H0415: 1 and H0414: 1.		
HOFAE31	772992	508	2 - 220	3195	Glu-1 to Leu-8, Arg-38 to Cys-49.	H0414: 2		
HOFAE61	707359	509	3 - 293	3196	Val-18 to Arg-31, Arg-36 to Pro-42.	H0415: 1 and H0414: 1.		

							Arg-57 to Cys-62.						
HOFMF84	868887	510	136 - 273		3197		Gly-30 to Gly-46.		H0414: 2				
HOFMA24	782275	511	63 - 347		3198		Ser-2 to Arg-15.		H0415: 2				
HOFMB78	572941	512	1 - 399		3199		Arg-10 to Lys-23.		AR089: 26, AR061: 10 H0415: 8 and H0414: 2.				
HOFMB83	572839	513	3 - 158		3200		Thr-7 to Gly-18, Pro-20 to Gly-26.		H0415: 2				
HOFMD13	916959	514	232 - 405		3201				H0415: 2				
HOFME41	867993	515	55 - 264		3202				H0415: 2				
HOFMF03	924679	516	3 - 446		3203		Lys-36 to Ala-52, Thr-54 to His-61, Pro-90 to Thr-96.		H0415: 2				
HOFMF70	734917	517	1 - 387		3204		Pro-31 to Arg-36, Glu-41 to Gln-52.		H0415: 2	13q11-q12	121011, 121011, 129500, 253700, 601885, 602221		
HOFMG21	973358	518	66 - 497		3205		Pro-1 to Pro-6, Asp-41 to Arg-67, Gly-100 to Val-106.		AR089: 6, AR061: 3 H0415: 3	1q42	106150, 106150, 145260, 173870, 173870, 600759, 600996, 601744, 601975		
HOFMH12	964722	519	2 - 478		3206		Arg-1 to Cys-16, Tyr-59 to Lys-68,		H0415: 3 and H0414: 1.				



HOFMH38	920365	520	3 - 413	3207	Glu-76 to Arg-82.	AR089: 5, AR061: 3 H0415: 1 and H0414: 1.	5	
HOFMH95	973359	521	2 - 211	3208	Val-15 to Ala-22, Val-26 to Gly-38, Gln-65 to Gly-70.	H0415: 3		
HOFMI01	609722	522	2 - 121	3209	Cys-2 to Gly-7, Ala-14 to Pro-20.	H0415: 2		
HOFMI62	796358	523	3 - 452	3210	Asp-1 to Gly-22, Pro-24 to Gly-34.	H0415: 8 and H0414: 2.		
HOFMI63	745133	524	1 - 225	3211	Ala-4 to Gly-11, Pro-26 to Trp-31.	H0415: 2		
HOFMJ44	719663	525	2 - 301	3212	Arg-1 to Asp-7, Ser-26 to Leu-39.	AR089: 30, AR061: 10 H0415: 1 and H0414: 1.		
HOFMK22	675122	526	3 - 359	3213	Asp-22 to Val-42, Phe-50 to Tyr-55, Leu-65 to Gln-70.	H0415: 2		
HOFMM27	973349	527	1 - 132	3214	Ala-5 to Trp-19.	H0415: 5 and H0414: 1.		
HOFMM72	464015	528	49 - 366	3215		H0415: 2		
HOFMN30	514556	529	422 - 234	3216		H0415: 2		
HOFMP31	698097	530	2 - 202	3217	Gly-1 to Pro-6, Pro-23 to Asp-28, Pro-36 to Ser-46, Lys-54 to Asn-63.	H0415: 2		
HOFMP79	775242	531	2 - 445	3218	Gly-1 to His-12, Ser-40 to Pro-66.	AR089: 11, AR061: 3 H0415: 2		

HOFMQ04	823439	532	34 - 318	3219	Glu-79 to Lys-89, Glu-96 to Leu-105.	H0415: 1 and H0414: 1.	
HOFMQ31	906933	533	183 - 449	3220	Gly-11 to Leu-19, Val-23 to Gly-32, His-34 to Ser-45.	H0415: 4	
HOFMQ65	789347	534	2 - 280	3221	Gly-1 to Ser-13, Arg-26 to Glu-35, Gly-38 to Met-48.	H0415: 2	
HOFMS68	464075	535	187 - 348	3222		H0415: 2	
HOFMS74	514568	536	340 - 2	3223	Thr-4 to Gly-9, Leu-32 to Glu-42, Pro-54 to Cys-68, Ile-97 to Gly-113.	H0415: 1 and H0435: 1.	
HOFMS89	575820	537	2 - 502	3224	Arg-34 to Thr-44, Pro-65 to Gly-79, Leu-98 to Ser-105.	H0415: 2	
HOFMT20	669738	538	2 - 157	3225	Asn-20 to Cys-29, Val-33 to Ser-40.	H0415: 2	
HOFMT43	811542	539	1 - 411	3226	Val-6 to Arg-12, Pro-19 to Thr-36, Ser-49 to Thr-54, Glu-61 to Trp-67, Pro-77 to Ala-84, Ser-104 to Asn-114.	H0415: 2	
HOFMT66	754251	540	2 - 169	3227	Arg-1 to Asn-8, Lys-20 to Gly-38.	H0415: 2	
HOFMT72	563575	541	3 - 248	3228	Gly-2 to Gly-9.	H0415: 1 and H0414: 1.	
HOFMU33	702492	542	2 - 373	3229	Arg-1 to Gly-20,	H0415: 2	

[illegible]

HOFNH33	715101	557	3 - 152	3244	Asp-14 to Gly-20, Arg-45 to Ala-50.	H0415: 2		
HOFNI08	974435	558	1 - 426	3245		H0415: 4		
HOFNI48	708727	559	140 - 376	3246	Pro-2 to Gly-13, Gly-59 to Ser-64.	H0415: 2		
HOFNI82	717355	560	117 - 362	3247	Gly-36 to Tyr-50.	H0415: 3		
HOFNLI8	666498	561	1 - 405	3248	Ser-26 to Pro-33.	AR089: 9, AR061: 3 H0415: 1 and H0414: 1.		
HOFNLI25	916963	562	41 - 346	3249	Lys-54 to Ser-60, Tyr-86 to His-93.	AR089: 8, AR061: 7 H0415: 3		
HOFNLI37	906250	563	2 - 394	3250	Gly-1 to Pro-6, Thr-24 to Ala-30, Ser-33 to Pro-41, Ser-51 to Ser-61.	H0415: 6, H0414: 2, H0046: 1 and H0271: 1.	10p13	601362
HOFNLI40	711205	564	1 - 225	3251		H0415: 2		
HOFNLI92	770088	565	244 - 414	3252	Gln-1 to Pro-8.	H0415: 2		
HOFNMI85	869113	566	2 - 340	3253		H0415: 2		
HOFNT59	615305	567	109 - 405	3254	Pro-7 to Ser-12, Glu-37 to Ser-42, Leu-45 to Gly-53, Leu-68 to Val-75, Ser-81 to Thr-86.	H0415: 2		
HOFNU72	705435	568	1 - 216	3255		H0415: 2	11p15.5	125852, 126452, 126452, 141900, 141900, 141900, 141900,

								141900, 141900, 142000, 142000, 142200, 142250, 142270, 176730, 176730, 176730, 190020, 191290, 192500, 192500, 194071, 194071, 204500, 600856, 601680, 602631, 602631
HOFNW10	916588	569	28 - 237	3256	Lys-1 to Ser-14.	H0415: 2		
HOFNW79	973351	570	6 - 365	3257		H0415: 8 and H0414: 2.		
HOFNY02	920218	571	217 - 495	3258		H0415: 2		
HOFNY50	715312	572	68 - 430	3259	Pro-15 to Pro-25, Lys-68 to Glu-76, Lys-89 to Arg-107.	H0415: 2		
HOFNZ15	660317	573	98 - 379	3260	Ser-18 to Ser-34.	H0415: 2		
HOFNZ16	859104	574	2 - 268	3261	Gly-1 to Pro-6.	H0415: 2		

HOFNZ21	677372	575	109 - 456	3262	Arg-1 to Gly-6.	H0415: 2	9p13-p12	230400, 250250
HOFNZ58	683473	576	29 - 229	3263		H0415: 2		
HOFNZ94	794308	577	99 - 218	3264		H0415: 1 and H0414: 1.		
HOF0A17	935553	578	142 - 369	3265	Gly-34 to Glu-39.	H0415: 2		
HOF0B88	751692	579	1 - 501	3266	Thr-2 to Val-11, Leu-18 to Gly-25, Pro-30 to Ser-35, Ala-40 to Pro-47, Lys-62 to Glu-70, Lys-76 to Arg-82.	H0415: 2		
HOF0B91	827631	580	1 - 234	3267		H0415: 2		
HOF0E94	924473	581	173 - 382	3268	Thr-1 to Ser-11, Ser-23 to His-29, Gly-53 to Gln-67.	H0415: 2		
HOF0F57	666909	582	3 - 419	3269		H0415: 2		
HOF0F84	739399	583	78 - 431	3270	Asn-1 to Gln-9, Pro-17 to Ala-30.	H0415: 2		
HOGAF39	947431	584	3 - 269	3271	Asp-1 to Leu-22, Val-26 to Trp-38.	H0435: 1 and S0152: 1.		
HOGAU90	954011	585	247 - 402	3272	Cys-10 to Asp-19.	H0615: 1 and H0435: 1.		
HOGAV36	926098	586	211 - 576	3273	Pro-8 to Lys-15, Arg-67 to Arg-74, Arg-76 to Gly-85, Glu-91 to Gly-97, Thr-113 to Phe-120.	H0663: 2, L0761: 1, L0771: 1 and H0435: 1.		
HOGBF78	575929	587	264 - 443	3274	Lys-1 to Val-7.	H0435: 2 and L0592:		

HOGCQ05	950216	588	381 - 193	3275	Pro-12 to Ala-17, Val-29 to Gly-36.	1. H0165: 1, H0435: 1 and L0747: 1.		
HOGCR32	575931	589	3 - 137	3276	Pro-3 to Lys-13, Thr-39 to Ile-45.	H0435: 2		
HOGCT45	717068	590	2 - 364	3277	Arg-1 to Glu-14, Thr-39 to Gln-45, Pro-52 to Lys-62, Glu-89 to Thr-94.	H0040: 1 and H0435: 1.		
HOGCX95	890607	591	52 - 660	3278		H0038: 2, L0758: 2, H0253: 1, H0616: 1, H0435: 1 and L0777: 1.		
HOGEE76	968956	592	732 - 298	3279		H0435: 2		
HOGEU49	961587	593	1 - 285	3280	Asp-25 to Ser-34, Tyr-39 to Gln-44, Leu-84 to Lys-90.	H0435: 1 and H0670: 1.		
HOOJQ59	965013	594	418 - 621	3281		H0648: 2, L0367: 1, H0651: 1, L0748: 1 and L0754: 1.		
HOVAF17	576627	595	215 - 358	3282		H0428: 2		
HOVAF71	757294	596	55 - 183	3283		H0428: 2		
HOVAG49	927320	597	2 - 298	3284		H0428: 2 and L0588: 1.		
HOVAI41	670963	598	3 - 107	3285		H0428: 2		
HOVAM50	723671	599	64 - 243	3286	Ser-22 to Arg-35, Lys-39 to Gly-44.	H0428: 2		
HOVAO76	770066	600	89 - 238	3287	Arg-15 to Gln-21.	L0754: 2, H0428: 1 and H0616: 1.		
HOVBQ10	964671	601	515 - 763	3288	Lys-21 to Gly-26.	L0777: 6, L0758: 5,		

HOVBY34	706816	602	2 - 295	3289			L0747: 2, H0428: 1, L0770: 1, L0768: 1, L0533: 1, H0666: 1, L0750: 1 and L0755: 1. H0428: 2		
HOVBZ26	888442	603	3 - 215	3290		Gly-1 to Ala-8, Glu-67 to His-74. Gly-37 to Arg-46, Ser-57 to Trp-70.	AR051: 44, AR050: 43, AR054: 30 H0428: 2		
HOVCA52	727170	604	232 - 354	3291			H0428: 2		
HOVCD39	705406	605	25 - 192	3292		Ser-8 to Leu-16.	H0428: 2		
HOVCI76	858845	606	60 - 284	3293		Arg-13 to Gly-18, Gln-44 to Ser-50.	H0428: 3		
HOVCI77	713792	607	119 - 241	3294		Lys-7 to Ser-16.	H0428: 2		
HOVCJ24	858844	608	68 - 319	3295		Leu-16 to His-22, Cys-50 to Pro-55.	H0428: 2		
HOVCM22	674177	609	219 - 482	3296		Ser-1 to Lys-14, Gln-48 to Asn-63, Glu-70 to Pro-88.	H0674: 2, H0549: 1 and H0428: 1.		
HOVCO11	970814	610	157 - 423	3297		Val-11 to Leu-18.	H0428: 2 and L0770: 1.	7p15	138079, 138079, 139191, 142959, 153880, 180104, 600994, 601649
HOVCO58	736065	611	283 - 420	3298			H0428: 2		
HOVCQ47	496190	612	1 - 213	3299			L0758: 3, H0428: 2, L0794: 2, L0764: 1,		



HOVDY04	926219	613	81 - 320	3300	Ser-25 to Gly-45.	L0803: 1 and L0593: 1. L0769: 4, L0758: 3, L0717: 2, H0428: 2, L0794: 2, L0731: 2, L0591: 2, L0776: 1, L0786: 1 and L0779: 1.		
HOVEE58	968699	614	131 - 3	3301	Thr-11 to Pro-21.	H0428: 1 and H0032: 1.		
HOVEK70	909138	615	3 - 395	3302	Met-10 to Gly-18.	AR089: 10, AR061: 4 H0038: 4, H0616: 3, L0747: 3, L0758: 3, L0663: 2, H0369: 1, H0428: 1, L0769: 1, L0542: 1, L0809: 1, L0666: 1, L0665: 1, L0743: 1, L0777: 1, L0731: 1 and S0456: 1.		
HOVEV36	959234	616	128 - 307	3303		H0428: 2 and H0546: 1.		
HOVJA10	961467	617	37 - 225	3304		H0688: 3		
HPCAB21	573829	618	57 - 155	3305		S0146: 2		
HPCAB31	698320	619	96 - 230	3306		H0658: 1, S0146: 1 and L0754: 1.		
HPCAE18	574952	620	2 - 355	3307		S0146: 2	12q24	113100, 124200, 147440, 158590, 160781, 163950, 163950,

									251170, 276710, 600175, 601517
HPCAH18	573395	621	192 - 314	3308				S0146: 2	
HPCAH88	953808	622	488 - 637	3309				S0146: 2, H0046: 1, S0148: 1, L0439: 1 and L0745: 1.	
HPCA121	655535	623	134 - 259	3310				S0146: 2	
HPCA168	655536	624	58 - 168	3311		Lys-1 to Gln-6, Met-15 to Thr-29.		S0146: 2	
HPCAK16	662121	625	455 - 634	3312				H0615: 1, H0658: 1 and S0146: 1.	
HPCAK57	734931	626	265 - 420	3313				H0031: 1 and S0146: 1.	
HPCAL60	655723	627	41 - 142	3314		Gly-24 to Ser-34.		S0146: 2	
HPCAL86	924709	628	1 - 117	3315		Asn-12 to Ile-18.		S0146: 2.	
HPCAM22	655607	629	64 - 237	3316		Asp-26 to Phe-39.		S0146: 2	
HPCAN59	655742	630	91 - 210	3317				S0146: 2	
HPCAO04	655732	631	181 - 315	3318				S0146: 2	
HPCPF05	927168	632	88 - 249	3319				H0659: 2	
HPCPO07	951826	633	3 - 128	3320		Gly-29 to Tyr-34.		H0659: 2	
HPCQY57	927135	634	3 - 371	3321		Ser-34 to Gly-43, Lys-55 to Leu-71.		H0606: 1, L0803: 1 and H0659: 1.	
HPDOT03	922481	635	1 - 384	3322				H0549: 1, L0773: 1, L0768: 1, L0794: 1, L0803: 1, H0658: 1 and L0747: 1.	
HPDOY06	929318	636	22 - 201	3323				H0658: 2	
HPDPI69	966158	637	92 - 436	3324		Arg-7 to Tyr-14.		H0046: 17, H0658: 1	

HPDPK12	969340	638	155 - 316	3325			and H0672: 1.		
HPDPQ40	922464	639	2 - 223	3326	Ile-10 to Asn-36.		H0658: 2		
							L0520: 2, L0770: 2, H0658: 2, L0659: 1 and L0759: 1.		
HPDQO05	929274	640	588 - 875	3327	Ala-13 to His-22, Leu-80 to Arg-86.		L0749: 3, H0658: 2 and H0660: 1.		
HPDRB01	914437	641	306 - 449	3328			H0658: 2, L0745: 2, H0644: 1 and L0529: 1.		
HPDRD28	957791	642	308 - 511	3329			H0658: 2		
HPDRG92	967704	643	1 - 291	3330	Pro-51 to Phe-57, Ser-87 to Thr-94.		L0748: 3, H0658: 2 and L0741: 1.		
HPDRO20	957678	644	2 - 163	3331			L0021: 1, H0658: 1 and H0672: 1.		
HPDVB07	951634	645	342 - 554	3332	Arg-5 to Cys-10, Ser-22 to Ile-28.		H0644: 2 and H0658: 1.		
HPDVE05	928647	646	430 - 765	3333	Pro-22 to Asn-33, Arg-103 to Val-108.		L0512: 5, L0513: 4, H0686: 3, L0509: 3, L0789: 3, L0761: 2, L0772: 2, L0764: 2, L0717: 1, L0800: 1, L0378: 1, L0776: 1, L0659: 1, H0658: 1 and L0747: 1.		
HPDVF03	922193	647	524 - 847	3334			H0046: 2, L0794: 1, L0766: 1, H0658: 1, L0748: 1 and L0758: 1.		
HPDVK12	968977	648	97 - 243	3335			L0374: 1, L0804: 1, L0805: 1, H0658: 1, H0648: 1, L0750: 1 and		

HPDVM06	933443	649	439 - 591	3336	His-19 to Tyr-34, Glu-39 to Pro-47.	L0755: 1.		
HPDVY17	955902	650	226 - 444	3337	Gln-1 to Thr-6, Ser-22 to Leu-27, Ser-32 to Phe-37.	L0779: 2, H0032: 1 and H0658: 1. H0658: 2		
HPEAF19	867892	651	3 - 224	3338		H0165: 2		
HPEBA06	960802	652	253 - 2	3339	Trp-1 to Pro-11, Ala-27 to Phe-34, Ser-46 to Thr-60.	H0166: 1, H0059: 1 and L0768: 1.		
HPEBA51	723298	653	61 - 255	3340	Ile-18 to Asn-25.	H0166: 2 and L0598: 1.		
HPEBD31	655760	654	3 - 200	3341		H0166: 2 and L0604: 1.		
HPEBE44	716911	655	284 - 406	3342	Glu-31 to Cys-39.	H0166: 1, H0673: 1, L0763: 1 and L0581: 1.		
HPEKG18	914115	656	1 - 96	3343		H0673: 2		
HPEKJ42	922391	657	57 - 131	3344		H0673: 2		
HPEKU27	921663	658	220 - 408	3345		H0328: 1 and H0673: 1.		
HPEKX12	969251	659	2 - 217	3346	Gly-1 to Asn-8, Pro-22 to Ser-31, Thr-41 to Lys-48.	L0779: 2, H0428: 1, H0673: 1, L0766: 1 and L0658: 1.		
HPFAA06	960801	660	283 - 426	3347		H0168: 1 and H0169: 1.		
HPFCA36	524720	661	40 - 288	3348	Ser-12 to Ser-17, Lys-24 to Ser-34.	H0169: 2	6p21.1-p21.3	106300, 108800, 120290, 120290,

120810, 120820, 142857, 142858, 150270, 167250, 170261, 177900, 179450, 179605, 179605, 179605, 179605, 179605, 180297, 201910, 217000, 222100, 233100, 235200, 248611, 256550, 256550, 263200, 600202, 600261, 600364, 601498, 601690, 601868,									
--	--	--	--	--	--	--	--	--	--

[illegible]

HPFCT09	655563	677	13 - 120	3364	Glu-21 to Pro-26.	H0169: 2		
HPFCT53	974257	678	271 - 522	3365	Met-1 to Cys-9. Ile-3 to Ala-14, Arg-63 to Pro-68.	H0169: 3		
HPFCT62	655432	679	82 - 198	3366	Glu-9 to Arg-15, Pro-24 to Tyr-39.	H0169: 2		
HPFCV19	655706	680	79 - 195	3367	Leu-5 to Ser-11, Pro-13 to His-19, Lys-34 to Tyr-39.	H0169: 2 and L0776: 1.		
HPFCV71	525554	681	1 - 240	3368	Gly-22 to Cys-32.	H0328: 1, H0615: 1, H0169: 1, L0807: 1 and L0754: 1.		
HPFCX18	655588	682	153 - 263	3369	Ser-16 to Asp-26.	H0169: 2		
HPFDD06	960700	683	2 - 163	3370	Lys-23 to Val-34.	H0169: 2		
HPFDE38	655704	684	67 - 330	3371	Leu-4 to Lys-18, Gly-36 to Glu-45, Lys-60 to Cys-65.	H0169: 2 and L0809: 1.		
HPFDE61	974249	685	392 - 538	3372	Asp-1 to Arg-7, Thr-17 to Asn-22, Leu-25 to Pro-30.	H0169: 4		
HPFDF79	973732	686	156 - 320	3373	Ser-3 to Tyr-9.	H0169: 3		
HPFDG58	655610	687	121 - 318	3374	Cys-32 to Pro-38.	H0169: 2		
HPFDI23	655549	688	197 - 367	3375	Leu-5 to Gly-10.	H0169: 2		
HPFDL90	954333	689	2 - 202	3376		H0169: 2		
HPFDS59	655543	690	8 - 160	3377		H0169: 2		
HPFDT17	581133	691	166 - 342	3378	Pro-18 to Asn-25.	H0169: 2		
HPFDT54	655530	692	36 - 212	3379		H0169: 2 and L0763: 1.		
HPFDT61	974569	693	63 - 173	3380		H0169: 3		

HPFDU30	522113	694	2 - 232	3381	His-46 to Pro-51.	H0169: 2		
HPFDU38	867879	695	36 - 167	3382		H0169: 2		
HPFDU59	739617	696	214 - 369	3383		H0169: 2		
HPFDV71	867870	697	124 - 354	3384	Pro-14 to Gly-25.	AR050: 117, AR054: 88, AR051: 81 H0169: 2		
HPFDX13	655571	698	1 - 294	3385	Val-1 to Lys-11, Pro-24 to Asp-33, Lys-44 to Glu-58.	H0169: 2, L0747: 2, H0688: 1, L0770: 1, L0803: 1, L0748: 1 and L0756: 1.		
HPFDZ20	655764	699	25 - 213	3386		H0169: 2		
HPFEA08	960372	700	2 - 187	3387	Ile-1 to Gly-44.	H0169: 3		
HPFEA32	925499	701	142 - 309	3388		H0169: 2		
HPFMA06	953536	702	63 - 212	3389	Ala-7 to Arg-12.	H0674: 2		
HPFML02	917775	703	39 - 113	3390	Lys-9 to Leu-15.	H0674: 2		
HPIAE79	655748	704	17 - 394	3391	Asn-1 to Lys-7, Pro-14 to Cys-23.	S0150: 2		
HPIAO83	655595	705	2 - 334	3392	Ser-1 to Arg-7, Pro-57 to Trp-67, Pro-70 to Ala-75, Ser-87 to Gly-95.	S0150: 2		
HPIAQ49	919469	706	106 - 243	3393	Pro-39 to Glu-46.	S0150: 2		
HPIAQ76	655573	707	61 - 2	3394	Lys-1 to Lys-17.	S0150: 2		
HPIAS40	928614	708	2 - 463	3395	Gly-1 to Val-6, Asp-25 to Gln-42.	H0484: 1 and S0150: 1.		
HPIAV80	615007	709	64 - 174	3396	Ser-8 to His-16.	S0150: 2		
HPIAX11	925424	710	282 - 608	3397		AR061: 9, AR089: 7 H0616: 1, S0150: 1 and L0581: 1.		



HPJAZ37	655753	711	2 - 289	3398			S0150: 2		
HPJBQ37	884289	712	2 - 424	3399	Ile-47 to Val-53, Phe-71 to Thr-76, Ser-105 to Thr-113, Glu-121 to Ser-129.	AR089: 4, AR061: 2 S0150: 2			
HPIBR51	725539	713	1 - 468	3400	Ala-15 to Ser-21, Gln-30 to Asp-36.	H0546: 1 and S0150: 1.			
HPIBT49	655719	714	176 - 283	3401	Tyr-30 to Cys-36.	S0150: 2			
HPIBY65	655757	715	133 - 294	3402		S0150: 2			
HPICC89	786117	716	211 - 414	3403		L0439: 2, H0616: 1 and S0150: 1.			
HPJAB19	655540	717	1 - 153	3404		S0152: 2			
HPJAB84	655531	718	3 - 269	3405	His-1 to Asp-6, Ala-16 to Ala-25.	S0152: 2			
HPJAC36	655601	719	154 - 330	3406	Cys-5 to Gly-12, Ser-47 to Arg-52.	S0152: 2 and L0780: 1.			
HPJAC92	867831	720	3 - 251	3407	His-1 to Leu-19.	S0152: 2			
HPJAD09	655712	721	180 - 332	3408		S0152: 2			
HPJAD66	655694	722	141 - 290	3409	Val-2 to Ser-14, Gly-27 to Ala-37.	S0152: 2			
HPJAD82	655765	723	53 - 187	3410	Arg-5 to Lys-13, Ser-20 to Thr-25.	S0152: 2			
HPJAV07	952852	724	180 - 335	3411	Leu-43 to Cys-51.	S0152: 2			
HPJAW56	823393	725	346 - 594	3412		L0748: 3, S0152: 2, H0615: 1, H0617: 1 and L0758: 1.			
HPJBI17	655761	726	162 - 326	3413	Ser-29 to Arg-35.	S0152: 2			
HPJBI89	655708	727	1 - 81	3414	Ser-19 to Gln-25.	S0152: 2			
HPJBK52	655751	728	99 - 263	3415		S0152: 2			

HPJBU08	958979	729	29 - 193	3416	Gln-13 to Thr-18, His-40 to Met-45.	S0152: 2		
HPJBV17	655729	730	10 - 123	3417		S0152: 2		
HPJCC04	926787	731	32 - 370	3418	Asn-42 to Gly-51.	S0152: 2		
HPJCP10	964259	732	113 - 244	3419		S0152: 2		
HPJCP11	966676	733	95 - 337	3420	Pro-36 to Gly-62.	H0056: 1 and S0152: 1.		
HPJCS84	590404	734	2 - 286	3421		S0152: 2		
HPJCV50	968095	735	260 - 460	3422	Ala-14 to Lys-21, Asp-37 to Gly-48, Gly-60 to Leu-65.	H0253: 1 and S0152: 1.		
HPJCX15	655730	736	245 - 334	3423		S0152: 2		
HPJCX26	655600	737	239 - 349	3424		S0152: 2		
HPJCY70	655569	738	111 - 203	3425	Pro-3 to Cys-11.	S0152: 2		
HPJCZ03	922850	739	79 - 183	3426	Val-2 to Thr-8.	S0152: 2		
HPJCZ06	934170	740	102 - 242	3427	Ser-1 to Gly-16.	S0152: 2		
HPJDA08	958182	741	438 - 1031	3428	Leu-8 to Lys-19, Asp-25 to Arg-33, Ser-40 to Ser-63, Ala-70 to Val-77, Glu-91 to Asp-97, His-108 to Asn-116, Lys-130 to Glu-136, Asp-139 to Val-144.	S0152: 2 and L0070: 1.		
HPJDJ58	906904	742	386 - 556	3429		S0152: 2		
HPJDP05	931027	743	299 - 454	3430		H0615: 2 and S0152: 1.		
HPJDX94	838748	744	79 - 183	3431		S0152: 2		
HPJEE38	954970	745	292 - 483	3432	Ser-23 to Arg-28.	L0770: 2, L0779: 2, H0553: 1, L0766: 1, L0666: 1, S0152: 1 and		

HPJEI55	926815	746	14 - 130	3433	Gly-1 to Pro-7.	L0777: 1.
HPJEJ39	930988	747	284 - 538	3434	Gly-1 to Ala-11.	S0152: 2
HPJEQ04	927618	748	149 - 328	3435		S0152: 2
HPJEQ22	867725	749	239 - 448	3436	Thr-29 to Gly-38.	H0435: 1 and S0152: 1, 11
HPJET90	836503	750	39 - 377	3437	His-8 to Gly-18, Leu-40 to Ile-45, Asn-100 to Asp-105.	S0152: 2
HPJEV06	934096	751	70 - 213	3438	Leu-17 to Glu-23, Arg-27 to Glu-35.	AR061: 0, AR089: 0 S0152: 2
HPLAN47	717680	752	49 - 189	3439	Gly-1 to Arg-9.	L0754: 39, L0748: 7, H0553: 4, H0030: 1, L0142: 1 and S0454: 1.
HPLAR41	557554	753	236 - 3	3440		H0030: 2
HPLBB50	503751	754	287 - 72	3441		H0030: 2
HPLBL31	503732	755	16 - 183	3442	Gly-1 to Ala-7, Pro-42 to Asn-47.	H0030: 2
HPLBL57	503730	756	57 - 245	3443	Phe-29 to Lys-35.	H0030: 2
HPLBO61	558187	757	2 - 241	3444	Glu-1 to Thr-9.	H0030: 1, H0038: 1 and L0758: 1.
HPMAG19	705471	758	40 - 153	3445		H0031: 2
HPMAH75	766443	759	2 - 214	3446		H0031: 2
HPMBK34	954057	760	1 - 147	3447		H0031: 2
HPMBK49	577661	761	125 - 301	3448	Gln-20 to Ser-31, Phe-41 to Gly-47.	H0031: 2 and L0777: 2.
HPMBM48	575626	762	3 - 503	3449	Tyr-19 to Gly-46, Ser-48 to His-59, Gly-65 to Gly-77, Thr-91 to Tyr-96.	H0031: 3

HPMBN02	920865	763	1 - 120	3450			H0031: 2		
HPMBO10	968365	764	39 - 278	3451			H0031: 4		
HPMBO61	867677	765	1 - 249	3452		Gly-1 to Gly-8.	H0031: 3		
HPMBR17	785732	766	192 - 404	3453		Thr-1 to Gln-7, Pro-24 to Gly-32.	H0031: 2		
HPMBU81	557870	767	28 - 165	3454		Set-32 to Thr-41.	H0031: 2		
HPMBX35	531058	768	3 - 125	3455			H0031: 2		
HPMBX79	577637	769	118 - 276	3456			H0031: 2		
HPMBY76	531338	770	2 - 163	3457		Tyr-25 to Gly-32.	H0031: 2		
HPMBY83	527006	771	90 - 341	3458		Set-50 to Gly-55.	H0031: 4 and L0803: 12		
HPMBZ05	932527	772	62 - 196	3459			H0031: 2		
HPMCB65	531289	773	111 - 302	3460		Gly-12 to Ile-18.	H0031: 2 and L0605: 1.		
HPMCC73	531066	774	171 - 314	3461		Pro-28 to Pro-42.	H0031: 2		
HPMCD77	529960	775	3 - 278	3462		Asp-1 to Cys-6.	H0253: 1 and H0031: 1.		
HPMCI02	381961	776	326 - 66	3463		Leu-19 to Thr-25, Arg-66 to Phe-87.	H0031: 2, L0809: 1, L0438: 1 and L0439: 1.		
	881473	2656	3 - 341	5343					
HPMCI65	577598	777	27 - 161	3464			H0031: 2		
HPMCJ14	524768	778	93 - 317	3465		Glu-30 to Asp-40.	H0031: 3		
HPMCJ19	531279	779	1 - 243	3466			H0031: 2		
HPMCJ48	577601	780	44 - 304	3467			H0031: 2		
HPMCK65	742095	781	54 - 314	3468		Leu-6 to Leu-16, Thr-24 to Trp-29.	H0031: 2 and L0600: 1.		
HPMCS19	954056	782	3 - 182	3469		Gln-1 to Gln-9, Arg-15 to Gly-22.	H0031: 3		
HPMCS65	961250	783	16 - 108	3470		Tyr-1 to Arg-8.	H0031: 10		

HPMCV93	657532	784	31 - 186	3471	Arg-5 to Trp-15.	H0031: 3 and L0594: 1.		
HPMCW25	867673	785	1 - 285	3472	Gly-1 to Ser-8, Leu-36 to Gly-42, Leu-48 to Asn-55, Lys-83 to Met-91.	H0031: 2 and L0758: 1.		
HPMCW53	727392	786	2 - 202	3473	Pro-19 to Lys-26, Pro-36 to Gly-55.	H0031: 2		
HPMCX11	967655	787	115 - 312	3474	Gln-6 to Thr-19.	H0031: 2 and L0662: 1.		
HPMCY30	867687	788	119 - 271	3475	Asp-7 to Leu-12, Ala-16 to His-21.	H0031: 2		
HPMCY31	725180	789	189 - 338	3476		H0031: 2		
HPMCY35	571411	790	272 - 397	3477		H0031: 3, L0667: 1 and L0748: 1.		
HPMDJ09	582594	791	108 - 215	3478		H0031: 4		
HPMDL78	577590	792	49 - 330	3479	Glu-1 to Pro-6, Thr-45 to Val-50.	H0031: 2		
HPMDO39	531275	793	55 - 204	3480		H0031: 2		
HPMDR07	867682	794	33 - 227	3481		H0031: 2		
HPMDT91	745346	795	3 - 299	3482	Gly-38 to Ser-45, Gly-72 to Gly-78.	H0031: 2		
HPMDU19	577626	796	163 - 276	3483		L0748: 14, H0553: 4, L0754: 4, H0644: 3, H0031: 2, L0005: 1, L0774: 1, S0454: 1, L0749: 1 and L0780: 1.		
HPMDY82	531274	797	7 - 51	3484	Lys-8 to Lys-15.	H0031: 2		
HPMDZ62	531276	798	116 - 286	3485	Phe-5 to Gly-10.	H0031: 2 and H0644: 1.		

HPMEB66	531349	799	3 - 149	3486	Lys-20 to Thr-31.	1.		
HPMEC16	867658	800	136 - 249	3487		H0031: 2		
HPMEC36	668897	801	92 - 214	3488		H0031: 2		
HPMEC69	702501	802	1 - 114	3489	Ile-29 to Ile-36.	H0031: 2 and L0740: 1.		
HPMED52	531347	803	2 - 451	3490	Lys-23 to Ser-33.	AR061: 6, AR089: 3		
HPMEE48	531321	804	240 - 437	3491		H0031: 3		
HPMEE66	577619	805	182 - 319	3492		H0031: 4		
HPMEG50	925080	806	3 - 122	3493	Pro-20 to Pro-26.	H0031: 2		
HPMEI39	784781	807	117 - 443	3494	Arg-1 to Ser-8, Pro-23 to Gly-30, Glu-62 to Arg-68.	H0031: 3, L0731: 3, H0046: 2, L0617: 1, L0747: 1 and L0779: 1.	22q12-q13	102480, 123620, 133450, 133450, 138981, 188826, 190040, 190040, 190040, 600850, 601669, 602229
HPMFB02	920308	808	3 - 404	3495	Pro-15 to Leu-27, Phe-44 to Asp-49, Ala-83 to Lys-99.	H0031: 2	4q31.1-q31.2	189800, 600983
HPMFB28	575934	809	3 - 281	3496	Asp-37 to Thr-43, Ala-46 to Ala-53, His-64 to Trp-76.	H0031: 3		

HPMFB37	575620	810	277 - 465	3497		H0031: 8 and L0581: 2.		
HPMFB75	526594	811	46 - 234	3498		H0031: 2		
HPMFB84	577593	812	148 - 291	3499	Leu-2 to Gln-8, Pro-39 to Ser-44.	H0031: 2		
HPMFE35	577633	813	3 - 158	3500	Gln-14 to Thr-22.	H0031: 2		
HPMFE60	577636	814	2 - 214	3501	Ser-8 to Ser-14, Ser-27 to Pro-48.	H0031: 2		
HPMFE73	575941	815	1 - 183	3502	Pro-38 to Gly-45.	H0031: 2		
HPMFH21	575943	816	248 - 460	3503		H0031: 2		
HPMFJ50	575932	817	170 - 487	3504	Gln-7 to Ser-12.	H0031: 2, L0438: 2 and L0439: 2.		
HPMFJ55	577588	818	53 - 259	3505		H0031: 5		
HPMFL08	959569	819	191 - 346	3506	Met-43 to Trp-52.	AR089: 1, AR061: 1 H0031: 2		
HPMFL80	874359	820	2 - 205	3507	Ala-1 to Lys-6, Pro-12 to Trp-19, Met-63 to Lys-68.	H0031: 2, H0644: 1 and L0527: 1.		
HPMFM29	582595	821	482 - 631	3508		H0428: 1, H0031: 1, L0766: 1, L0659: 1, H0690: 1, L0439: 1, L0754: 1 and L0756: 1.		
HPMFN12	968821	822	262 - 444	3509	Arg-15 to Val-21.	H0031: 3		
HPMFP05	867662	823	107 - 427	3510	Leu-9 to Ile-17.	H0031: 2		
HPMFP30	577629	824	121 - 348	3511		H0031: 3		
HPMFP38	575914	825	118 - 261	3512		H0031: 3		
HPMFQ84	867651	826	483 - 692	3513		H0031: 4 and L0754: 1.		
HPMFS41	711640	827	64 - 342	3514	Ala-1 to Asn-9,	H0031: 3		

						Glu-17 to Glu-22, Trp-36 to Gln-44.			
HPMFT04	916662	828	28 - 180	3515			H0031: 4		
HPMFU89	575894	829	169 - 300	3516		Tyr-24 to His-32.	H0031: 2		
HPMFV28	652097	830	172 - 312	3517		Lys-1 to Gly-7.	H0031: 2		
HPMFV82	575911	831	57 - 167	3518		Phe-15 to Asn-20.	H0031: 2		
HPMFV88	956263	832	204 - 365	3519		Gln-10 to Gln-20.	H0031: 2		
HPMFV25	960065	833	16 - 246	3520		Arg-18 to Val-24, Glu-43 to Gly-54.	H0031: 2		
HPMFV78	932529	834	3 - 152	3521		Asp-19 to Ser-30.	H0031: 5 and L0142: 1.		
HPMFX13	575908	835	284 - 412	3522		Leu-34 to Cys-41.	L0774: 4, H0031: 2, L0439: 2, L0435: 1, L0803: 1 and H0670: 1.		
HPMFX65	867657	836	158 - 355	3523			H0031: 2		
HPMFX70	577642	837	3 - 218	3524		His-1 to His-7, Ser-16 to Glu-22, Phe-65 to Ser-71.	H0031: 2		
HPMFX92	577603	838	3 - 206	3525		Arg-28 to Leu-37.	H0031: 2		
HPMGA83	968359	839	88 - 243	3526		His-39 to Thr-44.	H0031: 4		
HPMGB22	506379	840	180 - 320	3527			H0031: 2		
HPMGCO7	920313	841	55 - 381	3528		Gln-6 to Trp-17.	H0031: 9 and L0758: 1.		
HPMGCC23	703835	842	1 - 306	3529		Arg-18 to Ser-29, Gly-62 to Tyr-78.	H0031: 2		
HPMGE31	867648	843	30 - 353	3530			H0031: 2		
HPMGE95	873392	844	176 - 340	3531			H0031: 3		
HPMGFO6	954823	845	1 - 564	3532		Gly-1 to Ser-16, Ser-37 to Lys-42.	H0031: 3, H0651: 1, L0731: 1 and L0758: 1		



HPMGF32	577615	846	226 - 92	3533	Arg-44 to Val-50. Tyr-1 to Ile-7, Cys-20 to Asp-33, Leu-40 to Ser-45.	H0031: 2			
HPMGH16	577641	847	267 - 398	3534		H0031: 2			
HPMGI03	924521	848	62 - 283	3535		H0031: 2	20		
HPMGI84	920326	849	79 - 219	3536		H0031: 3			
HPMGJ93	864040	850	147 - 359	3537	Trp-40 to His-45.	H0031: 2			
HPMGK37	575924	851	223 - 369	3538		H0031: 2			
HPMGK59	671936	852	159 - 488	3539	His-18 to Cys-23, Glu-33 to Phe-40, Thr-42 to Trp-47, Cys-53 to Glu-63.	H0031: 3, L0757: 3, L0803: 2 and L0766: 1.			
HPMGK62	730751	853	347 - 529	3540		H0031: 3 and L0754: 1.			
HPMGM33	854081	854	2 - 223	3541	Ala-1 to Asn-16, Lys-45 to Thr-54.	L0805: 5, H0031: 2, L0749: 2, L0766: 1, L0776: 1 and L0779: 1.			
HPMGM54	577599	855	189 - 356	3542		H0031: 2			
HPMGR80	506235	856	24 - 224	3543		H0031: 2	7p15-p12	138079, 138079, 139191, 142959, 153880, 180104, 600994, 601649	
HPMGS09	575951	857	46 - 111	3544		H0031: 2			
HPMGS24	796440	858	230 - 367	3545		H0031: 2			

HPMGT67	970815	859	1 - 123	3546	Ser-26 to Trp-32.	H0031: 2		
HPMGV12	968364	860	35 - 301	3547	His-1 to Glu-6.	H0031: 2		
HPMGV15	582596	861	88 - 210	3548		H0031: 4		
HPMGV59	577635	862	38 - 277	3549	Asp-23 to Pro-34.	H0031: 2		
HPMGW48	920309	863	3 - 257	3550	His-1 to Gln-15, Arg-37 to Asp-48, Ser-63 to Pro-77, Gly-79 to Lys-85.	H0031: 2		
HPMGX23	575903	864	3 - 314	3551	Ser-2 to Pro-27, Leu-38 to Asn-52.	H0031: 2	19q12	
HPMHA80	970813	865	142 - 294	3552		H0031: 2		
HPMHB74	577595	866	289 - 552	3553	Lys-31 to Thr-37.	H0031: 2, L0769: 1 and L0439: 1.		
HPMHB83	531382	867	1 - 147	3554	Gly-1 to Ser-8, Ile-41 to Ile-49.	H0031: 3		
HPMHC74	577631	868	46 - 198	3555		H0031: 2		
HPMHD66	928433	869	1 - 441	3556	Arg-13 to Ala-23, Met-27 to Gly-36, Ser-109 to Leu-116.	H0031: 2		
HPMHD71	760426	870	159 - 1	3557	Arg-1 to Thr-20.	H0031: 3		
HPMJC01	914759	871	1 - 267	3558		H0031: 1 and H0644: 1.		
HPMJC05	930844	872	2 - 370	3559	Leu-39 to Ser-46, Gly-87 to Pro-94.	H0644: 2		
HPMJD88	930806	873	136 - 330	3560	Gln-42 to Asp-50.	H0644: 3		
HPMJE84	867587	874	207 - 425	3561	Ile-1 to Gln-10, Ser-20 to Gln-27.	H0644: 2		
HPMJF76	965642	875	1 - 171	3562		H0644: 2		
HPMJT81	930873	876	166 - 276	3563	Glu-15 to Arg-20.	H0644: 2 and H0615:		

HPMJN59	946876	877	84 - 470	3564		1.	AR089: 21, AR061: 15 H0644: 2			
HPMJO46	922649	878	1 - 222	3565	Ala-1 to Phe-6, Thr-32 to Gly-38, Pro-54 to Gln-73.	H0644: 2				
HPMJR02	917419	879	160 - 429	3566	Arg-37 to Asn-50, His-81 to Gln-89.	H0644: 2				
HPMJV08	958001	880	204 - 353	3567	Tyr-15 to Tyr-21.	H0644: 3				
HPMJY55	922657	881	3 - 203	3568		H0644: 3				
HPMKB19	969478	882	287 - 454	3569	Ser-8 to Phe-26.	H0644: 2, L0794: 1 and L0748: 1.				
HPMKI53	957997	883	3 - 125	3570		H0644: 2				
HPMKM81	894416	884	64 - 567	3571	Arg-15 to Gln-21, Gln-47 to Ile-53, Lys-58 to Asp-72.	AR061: 2, AR089: 1 L0666: 3, L0777: 2, L0608: 2, H0046: 1, H0031: 1, H0644: 1, L0803: 1, L0783: 1, H0672: 1, L0740: 1, L0750: 1 and L0755: 1.	7q22	126650, 126650, 154276, 173360, 173360, 602136, 602136, 602136, 602447		
HPMKN43	867573	885	222 - 545	3572	Arg-2 to Tyr-7.	H0644: 2 and L0589: 1.				
HPMLE04	867533	886	343 - 543	3573		H0644: 3 and L0471: 1.				
HPMLK02	918123	887	173 - 421	3574	Leu-36 to Gln-52.	H0644: 2 and L0527: 1.				
HPMLK76	922621	888	155 - 370	3575	Arg-43 to Ser-48.	H0644: 2				

HPMLL74	953069	889	1 - 285	3576	Gly-4 to Ser-11.	H0544: 1, H0644: 1 and L0754: 1.		
HPMLW10	963037	890	53 - 211	3577		H0644: 2		
HPMSF86	509490	891	44 - 226	3578	Ser-8 to His-17.	H0111: 2		
HPRAE13	971652	892	3 - 329	3579	Gly-8 to Glu-21, Val-23 to Ser-37.	H0032: 2 and L0759: 1.		
HPRAN84	583489	893	87 - 299	3580	Cys-19 to Ser-29, Ser-31 to Gly-37, His-48 to Gln-53.	H0032: 2		
HPRAU45	536630	894	191 - 27	3581	Ser-12 to Gln-18, Arg-23 to Gly-30.	H0032: 2		
HPRAZ10	968692	895	1 - 183	3582	Gln-13 to Ile-22, Val-34 to Ser-39.	L0758: 2, H0688: 1 and H0032: 1.		
HPRBA65	655537	896	98 - 241	3583	Arg-23 to Glu-35.	H0032: 2		
HPRBE36	655587	897	91 - 330	3584	Ile-6 to His-11, Gly-24 to Val-29.	H0032: 2		
HPRBL91	655693	898	192 - 299	3585		H0032: 2		
HPRCB11	960316	899	178 - 336	3586	Ser-13 to Asn-20.	H0032: 2		
HPRCB21	655725	900	2 - 121	3587	Ser-19 to Ser-25.	H0032: 2		
HPRCC08	939490	901	3 - 296	3588	Leu-39 to Ile-47.	H0032: 2		
HPRCC61	964909	902	3 - 176	3589		H0032: 2		
HPRCN41	655554	903	23 - 169	3590		H0032: 2		
HPRCU13	968521	904	156 - 269	3591		H0032: 2		
HPRSB16	666295	905	3 - 188	3592		H0211: 2		
HPRTL26	849081	906	258 - 419	3593	Gln-1 to Gly-7, Thr-22 to Gly-31.	H0212: 2 and H0032: 1.		
HPRTP73	708761	907	127 - 273	3594		H0032: 1 and H0212: 1.		
HPVAB11	967944	908	295 - 495	3595	Arg-8 to Phe-20,	L0777: 3, L0662: 1, 20		

						Gly-36 to Lys-42.	L0803: 1, L0787: 1, H0672: 1, S0013: 1 and L0747: 1.		
HPVAF49	655578	909	108 - 287	3596		Arg-4 to Ser-20, Lys-50 to Glu-60.	S0013: 2		
HPVAF69	753744	910	2 - 145	3597		Ile-22 to Asn-28.	L0662: 1, L0774: 1, L0659: 1, H0672: 1, S0013: 1 and L0754: 1.		
HPVAH36	525537	911	204 - 362	3598		Ser-3 to Gly-11, Thr-42 to Gly-52.	T0069: 1 and S0013: 1.		
HPWAF85	655691	912	116 - 550	3599		Arg-39 to Asp-55, Ala-93 to Ser-99, Pro-102 to Ser-111.	S0044: 2 and H0618: 1.19q		
HPWAH48	655527	913	19 - 156	3600		Asn-6 to Trp-17.	S0044: 2		
HPWAS77	908450	914	655 - 266	3601		His-18 to Pro-24.	AR061: 7, AR089: 3 S0044: 2, L0747: 2, L0777: 2 and L0480: 1.		
HPWBA33	655733	915	66 - 227	3602		Ala-7 to Thr-13, Arg-43 to Arg-49.	S0044: 2		
HPWBO84	867289	916	14 - 289	3603		Arg-44 to His-50, Gln-62 to Arg-69, Gln-80 to Trp-87.	S0044: 2		
HPWCA53	657484	917	197 - 367	3604		Phe-24 to Thr-29.	S0044: 2		
HPWCJ27	655614	918	2 - 157	3605		Glu-10 to Gln-19, Gln-22 to Lys-27, Pro-37 to Val-44.	S0044: 2		
HPWCJ67	655560	919	236 - 373	3606		Leu-4 to Lys-9.	S0044: 2		
HPWCJ82	655577	920	215 - 415	3607		Ser-15 to Ser-22.	S0044: 2		
HPWDA73	514113	921	513 - 656	3608		Leu-43 to Leu-48.	S0044: 1 and S0396: 1.		

	716228	2657	53 - 373	5344					
HPWDA86	961529	922	15 - 164	3609	Gln-1 to Gly-8, Lys-15 to Ser-23.				H0648: 1 and S0044: 1.
HPWDD72	537333	923	193 - 342	3610					S0044: 2 and L0748: 1.
HPWSB35	655713	924	74 - 268	3611					S0174: 2
HPZAB38	655591	925	138 - 254	3612					S0168: 2
HSWAC73	710354	926	2 - 409	3613					H0618: 1, H0546: 1 and H0040: 1.
HSWAD39	705322	927	638 - 489	3614					L0777: 3, H0546: 2, L0803: 2, L0755: 2, L0637: 1, L0662: 1, L0794: 1, H0659: 1 and L0758: 1.
HSWBD86	785439	928	1 - 150	3615	Ser-13 to Ser-19, Arg-37 to Gly-48.				L0800: 2, L0764: 2, L0779: 2, H0546: 1, L0351: 1, L0769: 1, L0771: 1, L0438: 1, H0660: 1, L0439: 1 and L0592: 1.
HSWBI40	711066	929	2 - 307	3616					L0731: 3, H0545: 2, L0744: 2, L0021: 1, H0546: 1, L0769: 1, L0666: 1 and L0665: 1.
HSWBO34	868007	930	611 - 826	3617	Gln-1 to Phe-10.				L0777: 2, L0005: 1, H0546: 1, H0328: 1, L0761: 1, L0373: 1, L0527: 1, L0526: 1, L0754: 1, L0752: 1, L0755: 1, L0731: 1 and L0608: 1.

HTEAA54	923070	931	34 - 513	3618	Gln-1 to Met-10, Met-16 to Lys-21, Thr-26 to Met-32.	H0618: 2, H0038: 1 and H0616: 1.		
HTEAB52	537136	932	1 - 315	3619	Pro-53 to Asn-59.	H0038: 3		
HTEAD32	504353	933	50 - 187	3620	Arg-16 to Thr-28.	H0038: 2		
HTEAD95	961232	934	1 - 246	3621	Cys-5 to Ser-11, Pro-13 to Thr-18, His-28 to Arg-33, Arg-40 to Arg-45, Pro-52 to Arg-57, His-66 to Gln-71.	H0038: 3, L0747: 2, H0618: 1, L0665: 1, L0779: 1 and L0758: 1.		
HTEAF07	835805	935	87 - 326	3622		L0758: 6, H0038: 3, H0616: 1, L0659: 1 and L0779: 1.		
	954433	2658	330 - 91	5345	Arg-1 to Pro-9.			
HTEAF26	537271	936	238 - 116	3623	Thr-5 to Glu-11.	H0038: 11, L0758: 7, L0753: 2 and H0616: 1.		
HTEAG50	787500	937	199 - 104	3624	Val-6 to Lys-13.	H0038: 1 and H0616: 1.		
HTEAK57	536769	938	423 - 202	3625		H0038: 12, H0616: 6, H0593: 1, L0439: 1 and L0756: 1.	10p12-p11.2 600964, 602026	
HTEAL28	963538	939	3 - 626	3626	Gln-11 to Lys-24, His-60 to Leu-67, Arg-85 to Ser-92.	H0038: 11, L0758: 7, L0753: 2 and H0616: 1.		
HTEAP91	966113	940	10 - 324	3627	Glu-13 to Trp-29, Thr-31 to Thr-44, Arg-54 to Ser-71.	H0616: 4, L0758: 2 and H0038: 1.		
HTEAR84	783328	941	2 - 130	3628		H0038: 1 and H0616: 1.		

HTEAV43	927010	942	368 - 520	3629	Lys-17 to Lys-26.	L0758: 3, H0616: 2 and H0038: 1.		
HTEAY67	679390	943	280 - 143	3630	Tyr-14 to Ser-19.	L0758: 3, H0038: 2, L0794: 2 and L0779: 1.		
HTEAZ54	793441	944	286 - 501	3631		H0038: 2 and H0616: 1.		
HTEBC74	887782	945	1 - 321	3632	Pro-32 to Asn-39.	AR054: 7, AR051: 2, AR089: 1, AR061: 0 L0663: 2, H0038: 1, H0672: 1 and L0779: 1.		
HTEBD35	967959	946	13 - 252	3633	Asn-28 to Cys-34.	H0038: 2		
HTEBD40	779134	947	3 - 152	3634	Pro-44 to Ser-50.	H0038: 2 and H0616: 1.		
HTEBJ78	779265	948	3 - 971	3635	Ser-86 to Thr-97, Gln-104 to Pro-116, Glu-168 to Ser-182, Thr-190 to Ser-198, Glu-208 to Tyr-213, Ser-230 to Val-237.	H0038: 7, H0253: 1, H0616: 1 and L0151: 1.		
HTEBP39	742218	949	373 - 540	3636	Glu-38 to Ala-46.	H0038: 2, H0328: 1 and H0616: 1.		
HTEBS30	693377	950	185 - 334	3637	Ser-39 to Val-49.	H0038: 2 and H0616: 2.		
HTEBS77	953904	951	106 - 552	3638	Lys-1 to Asn-14.	H0038: 1 and H0616: 1.		
HTEBS80	854052	952	201 - 359	3639	Lys-24 to Val-32.	H0038: 2, H0040: 2 and L0758: 1.		
HTEBX62	508150	953	250 - 417	3640		H0038: 2		
HTEBY08	960427	954	3 - 356	3641	Ile-11 to Trp-17,	AR061: 1, AR089: 0		



HTEBY15	526281	955	1 - 231	3642	Arg-52 to Glu-65.	H0038: 4		
HTEBY28	923026	956	1 - 546	3643	Lys-66 to Thr-72. Arg-1 to Phe-12, Met-34 to Lys-39, Lys-46 to Ser-56, Pro-72 to Lys-79, Lys-101 to Asp-107, Trp-139 to Lys-148.	H0038: 2 H0616: 3 and H0038: 2.		
HTEBY41	711523	957	106 - 243	3644		H0038: 2 and H0616: 1.		
HTEBY61	967340	958	1 - 435	3645	Glu-9 to Arg-24, Arg-32 to Thr-40.	H0253: 1, H0038: 1 and L0758: 1.		
HTEBZ21	958381	959	2 - 121	3646		H0038: 2 and H0616: 1.		
HTECA13	507053	960	1 - 204	3647	His-27 to Leu-39.	H0038: 4 and H0616: 1.		
HTECA16	764416	961	111 - 389	3648	Glu-8 to Lys-17.	H0038: 2 and L0779: 1.		
HTECA21	911369	962	1 - 387	3649	Asn-1 to His-6, Arg-117 to Cys-126.	AR061: 596, AR089: 427 H0038: 2, H0616: 1 and L0439: 1.		
HTECA32	947605	963	792 - 406	3650		AR061: 49, AR089: 45 H0038: 2		
HTECA51	708860	964	96 - 248	3651		H0038: 2, L0748: 2, L0749: 2, L0769: 1, L0776: 1, L0659: 1 and L0663: 1.		
HTECA83	870692	965	3 - 311	3652	Arg-22 to Tyr-28, Ser-78 to Arg-87.	H0038: 2		

HTECB21	921070	966	32 - 271	3653	Tyr-1 to Arg-6, Ile-49 to Val-55.	H0038: 3		
HTECC13	971673	967	61 - 270	3654		H0253: 1 and H0038: 1.		
HTECC20	963353	968	763 - 1005	3655	Arg-1 to Arg-11, Arg-55 to Ser-70, Ser-76 to Gly-81.	H0038: 2 and H0616: 2.		
HTECC37	508143	969	1 - 147	3656		H0038: 1 and H0616: 1.		
HTECC38	844558	970	203 - 463	3657	Arg-15 to Leu-21, Ala-29 to Glu-34.	H0038: 4, H0616: 3, L0758: 3 and L0779: 1.		
HTECC66	790937	971	84 - 287	3658	Asn-9 to Asn-16, Asp-60 to Lys-68.	H0038: 2 and H0616: 1.		
HTECC80	796820	972	37 - 459	3659	Gln-18 to Trp-29, Arg-46 to Val-52.	H0038: 2 and H0616: 1.		
HTECC85	508138	973	1 - 297	3660	Ala-10 to Thr-17, Glu-19 to Glu-28, Thr-36 to Trp-44, Ile-47 to Gly-54, Ala-61 to Pro-69.	H0038: 2		
HTECC96	959874	974	138 - 491	3661	Pro-6 to Cys-11, Pro-77 to His-92.	H0038: 2		
HTECD17	508108	975	154 - 411	3662		H0038: 2		
HTECD18	973163	976	2 - 508	3663	Arg-1 to Ala-35, Gly-41 to Lys-61.	H0616: 14, H0038: 12, H0618: 6, H0253: 5, L0758: 5, L0768: 4, H0411: 2, L0779: 2, L0151: 1, L0697: 1 and S0398: 1.		
HTECD36	518124	977	1 - 141	3664	Val-9 to His-36.	H0038: 2		

HTECD62	527207	978	3 - 161	3665	His-8 to Arg-15, Lys-19 to Lys-36.	H0038: 2, L0794: 2, L0779: 2, H0616: 1 and L0758: 1.		
HTECD75	727422	979	3 - 275	3666	Gly-2 to Ala-8, Pro-10 to Thr-18, Pro-23 to Ser-34, Pro-45 to Asp-55.	H0616: 4, H0038: 2 and L0758: 1.		
HTECE09	620494	980	2 - 286	3667	Ile-1 to Gly-9.	H0038: 2		
HTECE44	764830	981	2 - 286	3668	Ser-29 to Gly-35, Asp-85 to Val-92.	H0038: 8, L0758: 5, L0794: 4, H0616: 2, L0763: 1 and L0777: 1.		
HTECE45	790894	982	2 - 352	3669		L0766: 2, H0038: 1 and H0616: 1.		
HTECE69	522983	983	2 - 253	3670	Ile-1 to Arg-13, Glu-25 to Leu-31.	H0038: 2		
HTECE91	522984	984	3 - 296	3671		H0038: 2		
HTEDF13	522964	985	123 - 257	3672	Glu-1 to Thr-6, Glu-30 to Met-43.	H0038: 2		
HTEDF23	522966	986	3 - 164	3673	Gly-2 to Arg-19, Arg-24 to Gly-29, Lys-48 to Arg-54.	H0038: 2		
HTEDF57	964734	987	2 - 418	3674	Asn-37 to Val-42, Lys-82 to Glu-95, Glu-100 to Leu-105, Tyr-114 to Ser-120, Leu-129 to Lys-134.	H0616: 2 and H0038: 1.		
HTEDF76	522973	988	141 - 329	3675		H0038: 2		
HTEDG16	925527	989	1 - 423	3676	Gln-61 to Cys-76, Ile-95 to Asp-111.	H0038: 2		

HTEDG34	761752	990	169 - 324	3677		H0616: 2 and H0038: 1.		
HTEDH21	522764	991	3 - 170	3678	Arg-1 to Glu-9, Thr-42 to Arg-49.	H0038: 3		
HTEDH22	522765	992	33 - 206	3679		H0038: 2, H0616: 2, L0769: 1, L0794: 1, L0779: 1 and L0758: 1.		
HTEDH54	957762	993	1 - 411	3680	Asn-1 to Ser-14, Glu-103 to Gly-108.	H0038: 1 and H0616: 1.		
HTEDI02	921243	994	121 - 705	3681	Glu-7 to Lys-13, Asp-29 to Leu-34, His-83 to Pro-91, Ser-106 to Thr-111.	AR061: 14, AR089: 12, H0618: 2, H0634: 2, H0038: 1, H0616: 1 and L0758: 1.		
HTEDI16	932292	995	65 - 544	3682	Lys-18 to Arg-24, Pro-30 to Thr-35.	H0038: 2, H0616: 2, L0740: 1 and L0758: 1.		
HTEDI82	536477	996	274 - 549	3683	Pro-20 to Thr-29.	H0038: 3		
HTEDI04	519940	997	43 - 165	3684		H0038: 2		
HTEDI30	771404	998	3 - 305	3685		L0740: 2, H0615: 1, H0428: 1, H0038: 1, L0662: 1, L0805: 1, L0661: 1 and L0751: 1.		
HTEDM08	960303	999	3 - 257	3686	Pro-31 to Ala-40.	H0038: 2 and H0616: 1.	8p12-p11.2	136350, 152760, 173370, 180100, 182900, 185430, 270800, 277700, 600617

HTEDO31	870711	1000	101 - 271	3687	Pro-1 to Trp-9, Pro-25 to Lys-31.	H0038: 2		
HTEDO51	530592	1001	3 - 164	3688	Arg-8 to Ser-20.	H0038: 2		
HTEDO59	964379	1002	130 - 231	3689		H0553: 1 and H0038: 1.		
HTEDP15	870675	1003	1 - 321	3690		H0038: 4		
HTEDP31	870548	1004	68 - 337	3691		H0038: 1 and H0616: 1.		
HTEDP32	839532	1005	152 - 322	3692	Ser-9 to Ala-15.	H0038: 2		
HTEDP83	536821	1006	1 - 345	3693		H0038: 2		
HTEDQ30	530589	1007	3 - 206	3694		AR061: 7, AR089: 3 L0758: 4, H0038: 2 and H0616: 1.		
HTEDQ72	795332	1008	53 - 475	3695	Pro-11 to Cys-28, Ser-41 to Leu-55, Pro-58 to Asn-63, Phe-67 to Ser-77.	H0616: 2, H0038: 1 and L0758: 1.		
HTEDQ83	530586	1009	318 - 494	3696		H0038: 2		
HTEDR71	761585	1010	88 - 171	3697		L0070: 2, H0038: 1 and H0616: 1.		
HTEDR91	530451	1011	53 - 238	3698	Ala-25 to Thr-32, Lys-46 to Gly-52.	H0038: 2		
HTEDU45	870708	1012	137 - 706	3699	Ile-2 to Gly-8.	L0731: 6, L0758: 3, H0618: 1, H0038: 1 and L0794: 1.		
HTEDU48	932315	1013	2 - 730	3700	Lys-16 to Ser-22.	H0038: 2 and H0616: 2.		
HTEDV02	921114	1014	3 - 164	3701		H0038: 2		
HTEDX22	523959	1015	324 - 566	3702	Phe-37 to Ser-49.	H0038: 3, L0438: 2,		

HTEDX55	530452	1016	172 - 357				Arg-1 to Asn-13, Met-37 to Pro-47.	H0616: 1 and L0439: 1. H0038: 2		
HTEDY38	771505	1017	3 - 140	3704			Lys-28 to Lys-41.	H0616: 2 and H0038: 1.		
HTEDY54	922964	1018	151 - 762	3705			Asp-67 to Asn-72, Pro-113 to Gly-121.	H0616: 3, L0759: 3, H0038: 1, L0774: 1 and L0777: 1.		
HTEDY57	530580	1019	189 - 326	3706			Glu-11 to Gln-18.	H0038: 2		
HTEEA03	925399	1020	86 - 199	3707			His-1 to His-10.	H0169: 2 and H0038: 1.		
HTEEB18	523962	1021	271 - 549	3708			Gln-9 to Asn-26.	H0038: 2 and L0779: 1.		
HTEEB33	924818	1022	100 - 615	3709			His-19 to Lys-55, Pro-72 to Ser-84, Ser-92 to Gly-104, Ser-111 to Asp-124, Thr-129 to His-141.	H0038: 5 and H0618: 1.		
HTEEC10	968517	1023	1 - 216	3710			Ser-1 to Gly-14, Lys-28 to Ser-37.	H0038: 2 and H0616: 1.		
HTEEE65	530157	1024	202 - 384	3711				H0038: 2, L0758: 2 and L0779: 1.		
HTEEF31	924840	1025	88 - 345	3712			Pro-5 to Gln-13, Thr-40 to Arg-45, Thr-52 to Gln-57, Phe-59 to Gly-64.	H0038: 2		
HTEEH31	507814	1026	72 - 215	3713			Glu-9 to Val-15, Glu-24 to Pro-30.	H0038: 3		
HTEEU23	524059	1027	2 - 328	3714			Pro-8 to Leu-13.	H0038: 2		

HTEEU52	530199	1028	128 - 343	3715	Pro-32 to Asp-39, Lys-57 to Gly-65.	H0038: 1 and H0616: 1.		
HTEEU88	698315	1029	106 - 240	3716	Ser-1 to Ser-8, Ser-11 to Trp-19.	H0038: 3		
HTEEU92	960127	1030	136 - 393	3717	Asn-2 to Lys-8, Lys-16 to Asp-23, Arg-28 to His-51.	H0038: 2 and L0779: 1.		
HTEEV53	523957	1031	48 - 311	3718	Pro-24 to Ala-38.	H0038: 2		
HTEEW73	917206	1032	55 - 507	3719		H0038: 4, L0779: 2, L0758: 2 and L0618: 1.		
HTEEZ95	530095	1033	1 - 147	3720		H0038: 2		
HTEFJ53	935982	1034	103 - 222	3721		H0038: 2		
HTEFM31	771355	1035	298 - 429	3722		H0616: 2 and H0038: 1.		
HTEFN15	959854	1036	266 - 493	3723		H0038: 2 and H0616: 1.		
HTEFO32	529272	1037	150 - 73	3724	Phe-3 to Val-24.	H0038: 2		
HTEFO76	770270	1038	240 - 416	3725		H0038: 1 and H0616: 1.		
HTEFP14	659369	1039	3 - 260	3726		H0038: 4 and H0616: 1.		
HTEFP50	507219	1040	124 - 321	3727	Met-41 to Ile-46.	L0776: 3 and H0038: 2.		
HTEFP61	711399	1041	119 - 352	3728	Arg-1 to Gln-22.	H0038: 3		
HTEFS60	836010	1042	1 - 168	3729		H0038: 1 and H0616: 1.		
HTEFU46	920604	1043	118 - 195	3730		H0038: 2		
HTEFW55	787550	1044	273 - 662	3731		H0616: 4 and H0038: 1.		

HTEFW56	528019	1045	35 - 358	3732	Arg-1 to Asp-7, Trp-24 to Cys-29, Ser-68 to Ile-73.	H0038: 2 and H0616: 1.		
HTEFW78	961061	1046	1 - 279	3733	Arg-3 to Leu-10, Gln-34 to Glu-41, Ile-48 to Ser-53.	H0038: 1 and H0616: 1.		
HTEFX53	842047	1047	268 - 35	3734	Lys-1 to Thr-6.	H0038: 3		
HTEGA13	656077	1048	2 - 139	3735		H0038: 3	2q37.3	
HTEGA17	964198	1049	2 - 1519	3736	Val-11 to Ser-19.	H0038: 15, L0758: 5, H0618: 1, H0253: 1, L0151: 1 and L0768: 1.		
HTEGA43	715583	1050	190 - 306	3737	Lys-7 to Tyr-19.	H0038: 2		
HTEGA47	503300	1051	2 - 298	3738	Lys-6 to Lys-16, Arg-44 to Gln-51, Asn-57 to Phe-63, Ser-84 to Trp-89.	H0038: 2, L0779: 2 and L0758: 2.		
HTEGD11	967698	1052	190 - 468	3739	Gln-6 to Ser-11, Ser-15 to Gly-31, Ser-69 to Lys-93.	H0038: 1 and H0616: 1.		
HTEGE44	528017	1053	2 - 334	3740	Asn-1 to Pro-9.	H0038: 2		
HTEGF78	614242	1054	210 - 407	3741	Thr-1 to Ala-7.	H0038: 2		
HTEGF95	796660	1055	76 - 267	3742	Glu-25 to Trp-31, Lys-49 to Ser-54.	H0038: 1 and H0616: 1.		
HTEGG07	954115	1056	144 - 335	3743		H0038: 2		
HTEGG61	528007	1057	2 - 217	3744		H0038: 2		
HTEGK51	520046	1058	3 - 143	3745	Pro-13 to Lys-25.	H0038: 2		
HTEGM38	675087	1059	84 - 263	3746	Ala-15 to Tyr-24, His-32 to Asp-39.	AR089: 1, AR061: 0 H0038: 2	11q25	602782
HTEGN63	520037	1060	1 - 183	3747	Asn-38 to Glu-47.	H0038: 2		



HTEGO05	932583	1061	3 - 884	3748	Pro-12 to Tyr-21.	AR089: 1, AR061: 0 H0038: 2, L0745: 2 and H0616: 1.		
HTEGQ21	923059	1062	134 - 433	3749	Lys-28 to Lys-34, Glu-42 to Ser-48, Ser-53 to Phe-63.	L0794: 15, H0616: 13, H0038: 7, H0253: 1 and L0758: 1.		
HTEGQ74	573865	1063	2 - 187	3750	Val-3 to Ser-8, Cys-35 to Lys-45.	H0038: 2		
HTEGR56	959871	1064	23 - 196	3751	Glu-8 to Ile-22.	H0038: 2		
HTEGR88	871611	1065	160 - 402	3752		H0038: 3		
HTEGS16	527914	1066	131 - 352	3753		H0038: 2		
HTEGS34	458520	1067	220 - 405	3754	Pro-35 to Glu-43, Gly-52 to His-57.	H0038: 2, L0758: 2, H0294: 1 and H0616: 1.		
HTEGS93	506653	1068	155 - 355	3755		H0038: 2		
HTEGT29	870638	1069	200 - 367	3756	Arg-1 to Thr-11.	H0038: 3 and L0758: 1.		
HTEGT33	716783	1070	170 - 463	3757		H0038: 2 and L0758: 2.		
HTEGU13	520041	1071	2 - 205	3758	Ala-1 to Tyr-14, Thr-28 to Ser-60.	H0038: 3 and H0616: 1.		
HTEGU32	524053	1072	39 - 506	3759	Asn-44 to Asp-49, Ala-91 to Thr-97.	H0253: 8, H0038: 2, H0179: 1, L0151: 1 and L0758: 1.		
HTEGU62	573885	1073	3 - 98	3760		H0038: 2 and H0616: 1.		
HTEGU93	764831	1074	194 - 595	3761		H0038: 8, L0758: 5, L0794: 4, H0616: 2, L0763: 1 and L0777: 1.		
HTEGV08	959888	1075	220 - 399	3762	Thr-14 to Gln-20,	H0038: 2		

HTEGV60	822954	1076	80 - 418	3763	Cys-23 to Glu-31. Tyr-12 to Phe-17, Pro-32 to Asp-39.	H0038: 1 and H0616: 1.		
HTEGV84	870240	1077	234 - 449	3764		L0758: 8, H0038: 3, H0618: 2, H0616: 2 and H0253: 1.		
HTEGW41	573880	1078	1 - 243	3765	Ser-24 to Gln-30, Asn-38 to Leu-44, Pro-46 to Glu-59.	H0038: 2	20q13.2-q13.3	118504, 118504, 131242, 139320, 139320, 139320, 139320, 602025, 602235
HTEGW94	794350	1079	1 - 351	3766	Gly-1 to Ile-7, Pro-76 to Ala-82, Asn-86 to Ile-91.	H0038: 3 and H0616: 2.		
HTEGX74	783829	1080	200 - 556	3767	Asn-1 to Asp-9, Pro-17 to Cys-23.	L0758: 5, H0038: 3, H0618: 1, H0616: 1, L0768: 1 and L0794: 1.		
HTEGY01	917214	1081	2 - 388	3768	Arg-87 to Tyr-92.	H0038: 1 and H0616: 1.		
HTEGY85	573849	1082	91 - 312	3769		H0038: 2		
HTEHB07	870707	1083	90 - 350	3770	Gly-23 to Lys-29.	H0038: 5		
HTEHC20	526704	1084	198 - 326	3771		H0038: 3		
HTEHC47	973071	1085	719 - 84	3772	Ser-32 to Thr-37, Ser-161 to Cys-167.	AR050: 13, AR051: 13, AR061: 3, AR054: 1, AR089: 1 L0758: 5, H0616: 2		

HTEHC60	965998	1086	74 - 358	3773	Thr-44 to Ala-49, Pro-60 to Arg-67, Asp-83 to Lys-95.	and H0038: 1. H0616: 3 and H0038: 2.		
HTEHC78	573882	1087	2 - 256	3774	Ala-1 to Leu-9, Thr-11 to Gly-19, Arg-31 to Thr-39, Gln-44 to Ser-58.	H0038: 2		
HTEHE60	795264	1088	2 - 223	3775	Glu-57 to Pro-63.	H0038: 1 and H0616: 1.		
HTEHE67	784926	1089	143 - 652	3776	Ala-2 to Asn-7, Glu-47 to Ile-62, Pro-71 to Trp-81, Gly-83 to Glu-88.	H0616: 2, H0038: 1 and L0794: 1.		
HTEHE78	932312	1090	194 - 301	3777	Ser-1 to Arg-6, Gly-16 to Glu-26.	H0038: 3 and L0519: 1.		
HTEHE91	790342	1091	3 - 329	3778	Gln-1 to Asp-17, Ser-51 to Arg-63, Pro-70 to Asp-78, Val-86 to Asn-93, Pro-100 to Asp-105.	H0038: 2		
HTEHF13	667224	1092	201 - 332	3779		H0038: 2 and H0616: 1.		
HTEHF66	836999	1093	2 - 436	3780	Ala-1 to Tyr-6, Ala-88 to Asp-95.	H0038: 4		
HTEHG44	933624	1094	57 - 695	3781		H0618: 1, L0023: 1, H0038: 1, H0616: 1 and L0758: 1.		
HTEHI06	935984	1095	262 - 534	3782	His-16 to Ser-22, Ala-77 to Glu-83.	L0758: 3, H0038: 2 and L0747: 1.		

HTEHI14	526687	1096	216 - 458	3783		AR089: 5, AR061: 5 H0038: 4	
HTEHI54	533960	1097	3 - 350	3784	Arg-1 to Gly-9, Pro-50 to Ala-56.	H0038: 2	
HTEHI62	922559	1098	1 - 282	3785		H0038: 2 and H0616: 1.	
HTEHI93	870629	1099	1 - 330	3786	Lys-9 to Pro-14.	H0038: 3	
HTEHI64	530749	1100	136 - 249	3787		H0038: 2	
HTEHK40	660875	1101	2 - 301	3788	Thr-16 to Met-39.	H0038: 4	
HTEHK70	771432	1102	2 - 274	3789		H0038: 2	
HTEHK81	573866	1103	73 - 231	3790	Gln-2 to Leu-8, Asp-42 to Gly-47.	H0038: 2	
HTEHL96	573859	1104	3 - 404	3791	Glu-17 to Trp-27, Leu-29 to Phe-34, Leu-56 to Arg-61, Asn-74 to Gly-83.	H0038: 2	
HTEHO56	787521	1105	63 - 677	3792	Pro-9 to Asp-16, Gln-30 to Gln-36, Pro-69 to Ile-74, Val-78 to Pro-87, Ala-99 to Lys-112, Lys-117 to Gly-124, Lys-130 to Val-147, Ala-151 to Phe-156, Lys-180 to Asp-186.	H0616: 2, H0038: 1 and T0069: 1.	
HTEHP02	920625	1106	66 - 215	3793	Glu-13 to Pro-27, Leu-30 to Arg-37.	H0038: 2 and H0616: 2.	
HTEHP20	967443	1107	37 - 285	3794	Lys-5 to Glu-14, Arg-53 to Lys-60, Met-77 to Gln-83.	L0758: 3, H0038: 2, H0616: 2 and L0794: 1.	

HTEHP50	531505	1108	7 - 126	3795	Arg-2 to Arg-17.	H0038: 3		
HTEHP60	573853	1109	210 - 434	3796	Glu-18 to Ser-26.	H0038: 2		
HTEHP67	751866	1110	1 - 135	3797		H0616: 2, H0038: 1 and L0758: 1.		
HTEHP80	573830	1111	3 - 320	3798	His-1 to Ser-8, Asp-15 to Gln-50, Val-54 to Ser-67, Glu-76 to Lys-86, Ala-90 to Arg-105.	H0038: 2		
HTEHR83	573841	1112	3 - 197	3799	Phe-43 to Glu-49.	H0038: 2		
HTEHS19	529280	1113	1 - 237	3800	Gly-70 to Gly-75.	AR061: 5, AR089: 2 H0038: 2		
HTEHU20	573813	1114	61 - 234	3801		H0038: 2, H0616: 2 and L0758: 2.		
HTEHU68	786378	1115	109 - 294	3802	Lys-1 to Arg-6, Glu-23 to Arg-29.	H0038: 1 and H0616: 1.		
HTEHU73	870083	1116	76 - 276	3803		H0038: 2		
HTEHV72	920610	1117	1 - 357	3804	Phe-32 to Asn-37, Phe-73 to Tyr-79.	AR061: 8, AR089: 3 L0780: 3, L0759: 3, H0038: 2, L0779: 2, H0673: 1, L0803: 1, L0804: 1, L0666: 1 and H0648: 1.		
HTEHV86	785652	1118	2 - 466	3805	Ala-1 to Gly-8, Ser-52 to Lys-58, Leu-81 to Asn-86.	H0038: 1 and H0616: 1.		
HTEHW03	924832	1119	181 - 453	3806		H0038: 2		
HTEHW21	760552	1120	2 - 163	3807		H0038: 3, L0740: 2 and L0748: 1.		

HTEHX03	924826	1121	15 - 410	3808	Pro-4 to Lys-14, Thr-17 to His-22, Glu-25 to Arg-49, Pro-78 to Gly-85, Pro-120 to Phe-126.	H0616: 3, H0038: 2 and L0758: 1.		
HTEHX32	772643	1122	3 - 215	3809	Arg-19 to Asn-24, Gly-30 to Gln-47.	L0758: 5, H0616: 3, H0038: 2, L0794: 2 and H0253: 1.		
HTEHX51	668553	1123	84 - 212	3810		H0038: 2		
HTEHX92	527167	1124	17 - 292	3811		H0038: 3		
HTEIA60	859130	1125	2 - 343	3812		H0618: 2, H0038: 1 and L0783: 1.	16q24.1	256850
HTEIA80	721831	1126	10 - 225	3813		H0038: 3		
HTEIB14	963099	1127	3 - 308	3814	Gln-1 to Ser-10, Arg-18 to Thr-27, Arg-36 to Gln-65.	AR061: 7, AR089: 4 H0038: 4, H0616: 3, L0747: 3, L0663: 2, L0758: 2, H0369: 1, H0428: 1, L0769: 1, L0542: 1, L0809: 1, L0666: 1, L0665: 1, L0743: 1, L0777: 1, L0731: 1 and S0456: 1.		
HTEIF40	958355	1128	173 - 457	3815	His-16 to Ser-21, Ser-33 to Gly-60, Asp-87 to Glu-95.	H0038: 4 and H0616: 4.		
HTEIF68	573828	1129	139 - 249	3816	Ser-5 to Ile-17.	H0038: 2		
HTEIG32	699470	1130	135 - 326	3817	Leu-41 to Arg-55.	H0038: 3		
HTEIH70	573826	1131	58 - 192	3818		H0038: 2		
HTEIJ17	520113	1132	3 - 311	3819	Thr-65 to Thr-71, Arg-92 to Glu-99.	H0038: 3 and H0616: 1.		

HTEIJ41	712520	1133	1 - 186	3820	Ser-7 to Ile-13, Arg-21 to His-26, Met-33 to Ser-49.	H0038: 1, H0616: 1 and L0731: 1.		
HTEIJ73	958241	1134	40 - 255	3821	Pro-38 to Gln-54.	H0038: 1 and H0616: 1.		
HTEIJ77	772402	1135	1 - 69	3822		H0038: 1 and H0616: 1.		
HTEIK11	967431	1136	149 - 409	3823	His-8 to Ala-24, Thr-26 to Lys-33.	H0038: 2 and H0032: 1.		
HTEIK70	530454	1137	2 - 121	3824	Thr-24 to Thr-39.	H0038: 2		
HTEIK90	789121	1138	104 - 292	3825	Thr-41 to Lys-46, Arg-57 to Trp-62.	H0038: 1 and H0616: 1.		
HTEIL07	953803	1139	42 - 443	3826	Glu-13 to Thr-27.	AR061: 1, AR089: 0 L0758: 4, L0617: 2, L0794: 2, H0253: 1, H0038: 1, H0616: 1, L0789: 1 and L0779: 1.		
HTEIL48	523681	1140	83 - 271	3827		H0038: 3		
HTEIL70	520045	1141	2 - 331	3828	Lys-15 to Lys-29, Lys-36 to Thr-42, Val-48 to Thr-55, Gln-61 to Glu-80.	H0038: 2		
HTEIL71	760551	1142	1 - 246	3829	Gly-1 to Gly-6, Leu-28 to Asn-33.	H0616: 2 and H0038: 1.		
HTEIN68	753210	1143	74 - 346	3830	Gly-1 to Gly-6, Pro-12 to Pro-17, Arg-27 to Pro-40.	H0038: 2		
HTEIN95	839884	1144	159 - 545	3831	Asn-28 to Asn-33.	H0038: 1 and H0616: 1.		

HTEIO02	920622	1145	3 - 347	3832	His-1 to Arg-11.	H0038: 2 and H0616: 1.		
HTEIO12	653244	1146	152 - 334	3833	Phe-27 to Glu-39.	H0038: 3		
HTEIO28	573803	1147	159 - 356	3834		H0038: 2		
HTEIP88	941155	1148	1 - 252	3835	Met-23 to Thr-30.	AR089: 1, AR061: 0 H0038: 2 and H0253: 1.		
HTEIP92	523892	1149	194 - 370	3836		H0038: 4		
HTEIQ74	765794	1150	232 - 462	3837	Lys-1 to Trp-10.	H0038: 1 and H0616: 1.		
HTEIR33	928058	1151	41 - 472	3838	Arg-24 to Glu-38, Arg-46 to Ser-52, Pro-74 to Glu-80, Pro-118 to Ser-126.	H0616: 5, H0038: 2 and H0253: 1.		
HTEIS65	573775	1152	300 - 458	3839	Glu-15 to Lys-29.	H0038: 2		
HTEIU75	779163	1153	305 - 547	3840		H0038: 1 and H0616: 1.		
HTEIU92	870652	1154	1 - 339	3841	Asp-5 to Arg-13, Thr-37 to Ser-45.	AR061: 3, AR089: 1 H0038: 3		
HTEIV54	922027	1155	2 - 712	3842	Ala-1 to Arg-9, Thr-14 to Trp-20, Arg-46 to His-53, Pro-58 to Glu-67, Tyr-80 to Pro-86, Phe-151 to Pro-160.	H0616: 8, L0751: 6, L0753: 6, L0776: 4, L0758: 4, H0038: 3, L0759: 2, S0222: 1, L0770: 1, L0779: 1, L0731: 1 and L0608: 1.		
HTEIV86	784657	1156	1 - 231	3843	Arg-16 to Ser-23, Cys-30 to Arg-35, Arg-51 to Arg-57, Gly-62 to Thr-68.	L0779: 2, H0038: 1 and H0616: 1.		



HTEIW27	829698	1157	124 - 423	3844		H0038: 6 and H0616: 1.		
HTEIW37	573891	1158	68 - 352	3845		H0038: 2		
HTEIX28	836011	1159	204 - 554	3846	His-33 to Gly-42.	H0038: 2, L0758: 2, L0776: 1, L0809: 1, L0438: 1, H0658: 1 and L0756: 1.		
HTEIX85	864251	1160	2 - 226	3847		H0038: 2		
HTEIY52	963536	1161	58 - 216	3848	Gly-43 to Ser-48.	H0038: 1 and H0616: 1.		
HTEIY69	577783	1162	2 - 355	3849	Pro-7 to Pro-20, Pro-33 to Leu-49.	H0038: 2		
HTEIY80	955242	1163	188 - 460	3850	Thr-7 to Glu-16, Lys-24 to Asp-34, Thr-40 to Glu-48, Leu-52 to Lys-57.	H0038: 3 and L0758: 1.		
HTEIZ76	523764	1164	144 - 386	3851	Leu-5 to Gly-13.	H0038: 3, H0616: 1 and L0758: 1.		
HTEJB20	528015	1165	115 - 348	3852		H0038: 2		
HTEJB25	530590	1166	216 - 377	3853		H0038: 2		
HTEJB81	870644	1167	3 - 269	3854	Gly-47 to Ile-53.	H0038: 2		
HTEJC28	573774	1168	167 - 304	3855	Trp-14 to Glu-21, Gly-29 to Arg-36.	H0038: 2 and H0616: 1.		
HTEJC95	772989	1169	156 - 377	3856		H0616: 2 and H0038: 1.		
HTEJE15	908360	1170	2 - 319	3857		AR061: 4, AR089: 1 L0758: 7, L0794: 4, H0038: 2 and L0791: 1.		
HTEJE50	520049	1171	2 - 424	3858	Lys-9 to Lys-23,	H0038: 2		

HTEJF45	942476	1172	122 - 643	3859	Lys-30 to Lys-35. Ser-11 to Ala-19, Glu-24 to Leu-33, Pro-37 to Pro-45.	AR089: 21, AR061: 15 H0038: 2		
HTEJG24	526278	1173	79 - 276	3860		H0038: 2		
HTEJU43	774243	1174	148 - 384	3861		H0038: 2 and H0616: 1.		
HTEJL21	573742	1175	415 - 173	3862	Gly-1 to Leu-9, Cys-15 to Arg-26, Pro-44 to Arg-50.	L0758: 12, L0794: 6, H0038: 2, L0789: 2, L0752: 2, L0803: 1 and L0779: 1.		
HTEJM56	952255	1176	115 - 294	3863	Thr-17 to Ala-24.	H0038: 1 and H0616: 1.		
HTEJN10	958389	1177	63 - 368	3864	Thr-1 to Trp-9, Glu-12 to Arg-17, Pro-23 to Gln-40.	H0038: 2 and H0616: 1.		
HTEJN49	558383	1178	1 - 126	3865		H0038: 2		
HTEJN96	573845	1179	169 - 354	3866	Thr-13 to Asn-19.	H0038: 2		
HTEJP10	914785	1180	2 - 418	3867	His-1 to Cys-7.	H0038: 2		
HTEJP66	916481	1181	475 - 645	3868		H0038: 1 and H0616: 1.		
HTEJP71	767955	1182	1 - 534	3869	Gln-12 to Ser-20.	H0415: 1 and H0038: 1.		
HTEJT37	530596	1183	3 - 194	3870	His-1 to Ser-15, Glu-29 to Lys-46, Pro-51 to Gln-63.	H0038: 2 and L0747: 1.		
HTEJT74	676254	1184	1 - 450	3871	Pro-14 to Ser-31.	H0038: 2		
HTEJU30	573823	1185	1 - 219	3872	Lys-1 to Ser-6, Glu-22 to Ser-28,	H0038: 2 and H0616: 1.		

HTEJV62	694525	1186	23 - 337	3873	Ser-48 to Arg-56.			
HTEJX78	806395	1187	2 - 388	3874	Gly-11 to Thr-17.	H0038: 2		
					Glu-2 to Thr-11, Asn-35 to Gly-41, Thr-57 to Asn-63, Pro-73 to Glu-88, Pro-101 to Phe-110.	H0038: 2		
HTEJY21	530156	1188	3 - 440	3875	Pro-9 to Trp-16, Trp-18 to Gly-25.	H0616: 3, H0038: 2 and H0658: 1.		
HTEJY27	685272	1189	1 - 252	3876	Arg-3 to Ala-10, Asp-25 to Trp-31.	L0758: 4, L0779: 3 and H0038: 2.		
HTEJZ26	523818	1190	2 - 121	3877	Ala-1 to Pro-7, Arg-13 to Ser-22.	H0038: 2 and H0616: 1.		
HTEKC07	920925	1191	76 - 402	3878	Arg-1 to Pro-12, Trp-42 to Thr-47.	H0038: 2		
HTEKC12	815975	1192	1 - 291	3879	Gly-1 to Trp-6, Pro-12 to Ser-20.	H0038: 2		
HTEKD04	519938	1193	147 - 338	3880	Arg-7 to Ser-12, Trp-36 to Pro-60.	H0038: 5		
HTEKE41	974044	1194	103 - 315	3881	Glu-29 to Ser-36, Cys-49 to Thr-71.	H0616: 2 and H0038: 1.		
HTEKE46	870084	1195	753 - 1043	3882	Pro-22 to His-28.	H0038: 2 and H0618: 1.		
HTEKE80	790381	1196	130 - 438	3883	Glu-19 to Tyr-36, Glu-48 to Lys-53.	H0616: 3 and H0038: 2.		
HTEKF04	774260	1197	1 - 594	3884	Phe-1 to Gly-19, Gln-21 to Glu-31, Arg-79 to Lys-92, Ser-135 to Leu-145.	L0758: 5, H0616: 3 and H0038: 2.		

HTEKF24	573750	1198	103 - 267	3885	Arg-43 to Phe-48.	H0038: 2	1p13	102770, 188540, 600234, 601414, 601691, 601691, 601691, 601691, 601691, 601718, 602094
HTEKF35	573749	1199	27 - 233	3886	Pro-28 to Gly-33, Asp-35 to Leu-51, Leu-61 to Thr-69.	H0038: 2		
HTEKF68	772997	1200	1 - 291	3887	Glu-12 to Glu-19.	H0038: 2 and H0616: 1.		
HTEKI01	917176	1201	3 - 344	3888		H0038: 2		
HTEKI70	503039	1202	257 - 682	3889	Ala-24 to Tyr-31, Gln-38 to Lys-43.	H0038: 3, L0758: 2, H0253: 1, H0616: 1, L0794: 1, L0803: 1, L0745: 1 and L0588: 1.		
HTEKJ48	530588	1203	2 - 247	3890	Pro-7 to Gln-16, Arg-19 to Gly-32, Pro-34 to Glu-45, Phe-56 to Leu-65.	H0038: 2		
HTEKM14	745257	1204	1 - 264	3891	Lys-34 to Ala-42.	H0038: 3 and H0616: 1.		
HTEKO49	723148	1205	3 - 251	3892	Pro-8 to Thr-14.	H0038: 1 and H0616: 1.		
HTEKQ26	870627	1206	31 - 165	3893		H0038: 2		
HTEKQ85	784444	1207	348 - 569	3894	Lys-62 to Ser-67.	H0038: 1 and H0616:		

HTEKR75	870555	1208	139 - 318	3895		1.	H0038: 1 and H0616: 1.		
HTEKS15	529273	1209	290 - 427	3896		H0038: 2			
HTEKS20	846714	1210	3 - 569	3897		AR061: 2, AR089: 1 L0758: 14, H0038: 5, L0779: 4, L0794: 2 and H0616: 1.			
					Pro-9 to Arg-14, Phe-34 to Ile-39, Arg-41 to Lys-47, Leu-49 to Gly-55, Lys-104 to Lys-110, Asp-119 to Gly-124.				
HTEKS21	506651	1211	113 - 346	3898		Val-1 to Val-8, Arg-36 to Pro-41, Thr-50 to Leu-55.	H0618: 3, H0253: 1 and H0038: 1.		
HTEKS76	767658	1212	166 - 399	3899		Ser-9 to Ser-17, Leu-48 to Cys-54.	H0038: 1 and H0616: 1.		
HTEKX06	935945	1213	87 - 263	3900		Gly-46 to Glu-58.	H0038: 1 and H0616: 1.		
HTEKX08	959876	1214	118 - 375	3901		Glu-37 to Asp-46.	L0758: 10, H0038: 3, L0794: 2, H0618: 1, H0253: 1 and H0616: 1.		
HTEKX28	920927	1215	108 - 257	3902			H0038: 2 and L0758: 1.		
HTEKX70	573700	1216	68 - 259	3903			H0038: 2		
HTEKZ50	524054	1217	98 - 280	3904		Ile-9 to Asn-20, Ala-22 to Asp-29.	H0038: 2		
HTELA50	774268	1218	49 - 195	3905		Lys-8 to Lys-14.	H0616: 4, L0803: 1 and L0731: 1.		
HTELD47	934272	1219	165 - 536	3906			H0616: 3 and L0519: 2.		

HTELD82	779315	1220	79 - 267	3907	Arg-1 to Ser-6.	H0616: 2		
HTELE10	963563	1221	157 - 438	3908		H0616: 3		
HTELE41	791743	1222	260 - 475	3909	Ala-8 to Ser-13.	H0616: 5		
HTELG47	757740	1223	279 - 455	3910	Pro-2 to Asp-7.	H0038: 1 and H0616: 1.		
HTELG57	870621	1224	1 - 318	3911	Val-17 to Val-23, Phe-34 to Tyr-46, Thr-62 to His-67.	H0616: 2 and H0038: 1.		
HTELG80	773018	1225	3 - 107	3912	Val-1 to Thr-12.	H0616: 2		
HTELE44	766462	1226	351 - 542	3913	Gln-9 to His-21.	H0038: 1, H0616: 1 and L0745: 1.		
HTELI03	923071	1227	421 - 588	3914	Glu-27 to Thr-34.	H0038: 1 and H0616: 1.		
HTELI51	806403	1228	318 - 554	3915		H0616: 2 and L0749: 1.		
HTELE89	966134	1229	86 - 361	3916	Asn-1 to Gln-7, Phe-27 to Gly-38, Pro-61 to Gly-68.	H0616: 4 and L0758: 3.		
HTELK14	794339	1230	3 - 449	3917		H0038: 1 and H0616: 1.		
HTELE50	870552	1231	9 - 239	3918	Arg-21 to Phe-28.	H0616: 2		
HTELE68	923055	1232	107 - 349	3919		H0616: 2		
HTELE48	783824	1233	181 - 294	3920		H0616: 4		
HTELE51	952267	1234	394 - 648	3921		H0616: 2		
HTELE90	952269	1235	357 - 626	3922	Asn-56 to Ser-66.	H0616: 3 and L0779: 1.		
HTELE89	786268	1236	75 - 302	3923	Asp-19 to Lys-24.	H0038: 2 and H0616: 1.	18	
HTELO20	926910	1237	117 - 434	3924	Leu-21 to Gly-26,	H0616: 11 and H0038: 1.		

HTELO51	931120	1238	2 - 166	3925	His-101 to Trp-106.	1.			
					Ser-21 to Ser-29, Ala-43 to Asn-49.	H0616: 4			
HTELO73	761806	1239	56 - 232	3926	Lys-1 to Cys-7, Lys-16 to Glu-21, Ser-23 to Thr-37, Pro-40 to Ser-47, Glu-49 to Arg-59.	H0038: 1 and H0616: 1.			
HTELO93	934344	1240	1 - 204	3927	Asn-6 to Ser-12.	H0616: 2			
HTELP27	921621	1241	3 - 470	3928	Pro-1 to Val-16, Lys-22 to Asp-30, Asn-47 to Ala-61, Arg-89 to Leu-94.	H0616: 2, H0038: 1 and L0754: 1.			
HTELO41	922634	1242	97 - 462	3929		H0616: 3			
HTELO87	761768	1243	36 - 344	3930	Tyr-1 to Leu-7, Phe-51 to Asp-60.	H0616: 2 and H0038: 1.			
HTELR90	826531	1244	2 - 451	3931	Arg-29 to Leu-40, Gly-50 to Gln-55, Thr-73 to Ile-83, Lys-90 to Lys-95.	H0616: 2			
HTELT72	761598	1245	2 - 235	3932	Thr-7 to Asn-12, Leu-20 to Ile-29, Ser-54 to Ser-64, Met-66 to Gly-77.	H0616: 4, L0774: 2, H0618: 1, L0665: 1 and L0747: 1.			
HTELT83	780619	1246	3 - 521	3933	Lys-50 to Glu-55.	H0616: 4			
HTELU01	915339	1247	3 - 173	3934	Lys-1 to Lys-9.	H0616: 2			
HTELV06	934302	1248	37 - 240	3935	Lys-57 to Gly-63.	H0616: 2 and L0758: 1.			
HTELV10	963576	1249	106 - 270	3936	Asp-1 to Trp-11,	H0616: 2			

HTELV26	796832	1250	172 - 303	3937	Ser-49 to Lys-55. Thr-17 to Leu-22.	L0758: 16, H0038: 1 and H0616: 1.		
HTELV43	870615	1251	2 - 448	3938	Gly-2 to Ile-19, Lys-22 to Ala-31, Asp-49 to Asn-56.	H0038: 1 and H0616: 1.		
HTELV86	910946	1252	1 - 927	3939	Thr-5 to Ser-11, Asp-78 to His-85, Ser-153 to Ser-162, Glu-221 to Ala-234, Gly-247 to Glu-252.	AR089: 7, AR061: 6 H0616: 4, H0038: 1, L0745: 1 and L0779: 1.		
HTELW29	952241	1253	3 - 293	3940	Ala-21 to Trp-26, Arg-64 to Val-83.	H0616: 4, H0038: 2, L0768: 1 and L0779: 1.		
HTELW62	870596	1254	71 - 271	3941	Cys-2 to Glu-9.	H0616: 2 and L0758: 1.		
HTELX52	963506	1255	3 - 302	3942	Gln-3 to Gln-13.	H0616: 2		
HTELX72	761599	1256	25 - 117	3943		H0038: 1 and H0616: 1.		
HTELY64	764834	1257	140 - 283	3944	Thr-18 to Gly-25.	H0616: 2		
HTELZ07	952268	1258	94 - 312	3945	Lys-32 to His-41.	H0038: 1 and H0616: 1.		
HTELZ89	786424	1259	171 - 353	3946	Ser-46 to Thr-53.	H0616: 2		
HTEMA54	911666	1260	22 - 1167	3947	Gly-23 to Asn-30, Arg-45 to Lys-50.	AR089: 19, AR061: 13 H0618: 14, H0253: 12, H0038: 11, H0616: 2, L0794: 1, L0779: 1 and L0758: 1.	109400, 132800, 132800, 186855, 223900, 253800, 253800, 278700,	9q31



HTEMB26	827055	1261	75 - 143	3948	Thr-6 to Lys-23.	H0616: 2	602088
HTEMB28	870614	1262	103 - 342	3949	Tyr-4 to Tyr-11, Ala-20 to Ser-28, Val-44 to Arg-54.	H0616: 3	
HTEMB34	870589	1263	141 - 371	3950	Leu-25 to Asn-32, Ala-49 to Phe-56, Arg-60 to Lys-69.	H0616: 3	
HTEMB72	761602	1264	1 - 306	3951		H0038: 1 and H0616: 1.	
HTEMB83	775593	1265	2 - 292	3952	Lys-49 to Lys-56.	L0758: 9, L0794: 3, H0038: 2, H0616: 2, L0790: 1 and L0779: 1.	
HTEMC18	924727	1266	1 - 453	3953	Gln-16 to Gly-27, Glu-59 to Gly-65, Ser-107 to Arg-113.	H0253: 3, H0618: 2 and H0616: 1.	
HTEMC75	848193	1267	58 - 240	3954	Gln-15 to Arg-21.	H0038: 1 and H0616: 1.	
HTEMD10	963546	1268	1 - 270	3955	Gly-1 to Glu-8, Glu-16 to Ser-22, Asp-43 to Gly-49, His-65 to Met-70, Lys-79 to Gln-90.	H0616: 2 and L0758: 2.	
HTEMD73	761783	1269	2 - 310	3956	Ala-20 to Thr-44.	H0038: 2 and H0616: 2.	
HTEMF08	958386	1270	3 - 116	3957		H0616: 2	
HTEMJ34	786377	1271	248 - 496	3958		H0616: 6 and L0758: 1.	
HTEMJ54	963531	1272	388 - 570	3959		H0616: 4, H0038: 1	

HTEMK03	923066	1273	45 - 359	3960	Pro-11 to Gly-21, Pro-65 to Ser-71.	and L0748: 1. H0038: 1 and H0616: 1.		
HTEMM80	888686	1274	353 - 631	3961	Pro-32 to Gly-40, His-54 to Glu-74.	H0616: 5, H0038: 2, L0779: 1 and L0758: 1.		
HTEMN08	958374	1275	10 - 96	3962	Tyr-16 to Ser-25.	H0616: 2		
HTEMN95	789113	1276	54 - 251	3963		H0038: 1 and H0616: 1.		
HTEMO14	880634	1277	2 - 319	3964		H0616: 2 and H0038: 1.		
HTEMO85	771434	1278	166 - 276	3965	Phe-7 to Glu-12, Leu-22 to Tyr-28.	H0616: 3		
HTEMP48	767863	1279	1 - 159	3966	Gln-29 to Gly-34.	H0616: 3 and H0038: 1.		
HTEMP49	932319	1280	3 - 629	3967	Arg-8 to Ser-15, Ser-21 to Trp-40, Glu-63 to Trp-74, Ser-76 to Ser-81, Asp-83 to Asp-96, Glu-125 to Ser-131, Leu-198 to Leu-206.	H0038: 10, L0758: 7, L0768: 6, H0253: 4, H0616: 2, L0772: 1, L0773: 1, L0779: 1 and L0731: 1.		
HTEMR65	909280	1281	2 - 340	3968	Ser-7 to Asp-13, Leu-49 to Asn-54, His-62 to Tyr-68.	AR089: 17, AR061: 13 L0794: 2, L0752: 2, H0616: 1, L0763: 1, L0766: 1, L0664: 1, H0670: 1 and L0758: 1.		
HTEMS10	963527	1282	102 - 371	3969	Arg-1 to Arg-8, Leu-44 to Ala-50, Ser-58 to Ile-68.	H0038: 1, H0616: 1 and L0758: 1.		
HTEMS48	832506	1283	45 - 203	3970	Ser-16 to His-24.	H0038: 1 and H0616:		

HTEMT06	934338	1284	2 - 268	3971	Ile-14 to Asp-22, Pro-28 to Gln-43, Pro-49 to Arg-56, Pro-62 to Ser-78, Thr-81 to Glu-89.	1. L0758: 4, H0038: 1, H0616: 1 and L0779: 1.		
HTEMT89	922999	1285	2 - 160	3972	Glu-36 to Val-53.	2. L0758: 3 and H0616:		
HTEMU17	789623	1286	112 - 273	3973	Arg-21 to Pro-26.	H0616: 2, L0749: 2 and H0038: 1.		
HTEMU54	870618	1287	43 - 189	3974	Arg-18 to Lys-24, Thr-29 to Ile-34.	H0616: 3		
HTEMX92	913795	1288	23 - 514	3975	Gly-82 to Lys-89.	AR061: 6, AR089: 3 H0616: 2 and H0038: 1.		
HTEMY30	870662	1289	46 - 231	3976	Arg-32 to Gly-37.	H0038: 1, H0616: 1 and L0759: 1.		
HTEMZ04	927021	1290	162 - 377	3977		H0616: 2		
HTENA22	870601	1291	1 - 294	3978	Pro-20 to Ala-32, Arg-46 to Val-51.	H0038: 1 and H0616: 1.		
HTENB03	923050	1292	24 - 338	3979	Ser-29 to Val-39.	H0616: 3		
HTENC22	775544	1293	243 - 497	3980	Gln-29 to Leu-34, Arg-36 to Leu-44, Glu-58 to Ser-64, Ser-67 to Pro-85.	H0616: 2 and L0109: 1.		
HTENF08	958378	1294	380 - 574	3981	Ala-6 to Ala-12.	H0038: 1 and H0616: 1.		
HTENF95	795316	1295	111 - 347	3982	Glu-69 to Leu-79.	H0038: 1, H0616: 1 and S0152: 1.		

HTENG66	840151	1296	3 - 308	3983	Asn-2 to Glu-14, Pro-17 to Lys-27, Gly-42 to Ser-59, Cys-70 to Lys-81.	H0253: 3, H0038: 1 and H0616: 1.		
HTENG93	967432	1297	1 - 102	3984	His-7 to Ser-12.	H0038: 1 and H0616: 1.		
HTENH86	784798	1298	182 - 436	3985	Ile-28 to Ser-36.	H0616: 2, H0038: 1 and L0758: 1.		
HTENI58	917213	1299	41 - 589	3986	Asn-17 to Asn-30, Glu-37 to Lys-56, Asp-64 to Gln-69, Gly-77 to Ser-95, Lys-109 to Asn-114, Arg-158 to Ser-183.	AR089: 30, AR061: 13 L0794: 25, L0758: 4, H0038: 3, H0616: 2, L0779: 2, L0768: 1 and L0790: 1.		
HTENJ28	968135	1300	1 - 948	3987	Thr-6 to Arg-17.	H0038: 7, H0124: 1, H0040: 1, H0616: 1 and L0779: 1.		
HTENJ76	767838	1301	3 - 443	3988	Thr-17 to Ala-25, Pro-40 to Glu-46, Asn-76 to Glu-81, Gln-90 to Lys-104.	H0253: 1 and H0616: 1.	11q13.2-q13.3	133780, 151400, 602078
HTENK06	835851	1302	249 - 566	3989	Gly-23 to Pro-32.	H0616: 3 and H0618: 1.		
HTENK69	844557	1303	192 - 509	3990	Arg-15 to Leu-21, Ala-29 to Glu-34, Pro-40 to Trp-49, Ser-82 to Ala-97.	H0038: 4, H0616: 3, L0758: 3 and L0779: 1.		
HTENO12	917032	1304	76 - 1467	3991	Gly-29 to Glu-39, Gly-105 to Lys-117, Gln-135 to Leu-142,	H0616: 6, H0618: 3, H0253: 3 and H0038: 3.		

HTENQ05	928244	1308	1 - 654	3995	His-23 to Ser-34, His-77 to Glu-82.	H0038: 2, H0616: 1 and L0758: 1.			
HTENR10	963530	1309	24 - 380	3996	Gly-40 to Ala-45, Arg-65 to Thr-75.	H0038: 1 and H0616: 1.			
HTENR74	764828	1310	1 - 456	3997	Gly-1 to Pro-15.	H0038: 2 and H0616: 1.			
HTENR93	920834	1311	201 - 659	3998	Glu-49 to Ala-55, Cys-57 to Ser-85, Ser-90 to Glu-97, Ile-108 to Lys-114, Val-117 to Asn-127.	H0328: 1, H0038: 1 and H0616: 1.			
HTENS22	785996	1312	3 - 440	3999	Met-2 to Asn-16, Gln-30 to Gln-35, Met-42 to Gln-48, Ser-54 to His-60, Pro-63 to Ser-69, Leu-101 to Gln-118, Gly-139 to Pro-146.	H0038: 1, H0616: 1 and L0748: 1.			
HTENP54	787535	1306	17 - 208	3993	Arg-13 to Leu-18.	H0616: 17 and L0758: 1.			
HTENP80	775387	1307	2 - 496	3994	Asp-16 to Leu-22, Met-37 to Thr-42, Glu-55 to Gly-68.	H0038: 1 and H0616: 1.			
HTENO50	969213	1305	190 - 618	3992	Asn-1 to Glu-6, Gln-9 to Gly-15, Gln-18 to Arg-40.	H0038: 1 and H0616: 1.			
Pro-180 to Ser-186, Gln-202 to Ser-207, Gln-214 to Asp-220, Gly-246 to Thr-255.									

HTENS43	784936	1313	226 - 756	4000		H0616: 5, H0038: 3, H0253: 1, L0769: 1, L0794: 1, H0521: 1, L0748: 1, L0779: 1 and L0758: 1.		
HTENS91	870515	1314	387 - 725	4001	Trp-1 to Gln-10.	H0616: 2 and L0517: 1.		
HTENV57	944416	1315	99 - 617	4002	Gly-5 to Arg-10, Arg-18 to Ser-24, Glu-35 to Asn-42, Lys-72 to Gln-82, Tyr-90 to Lys-96, Lys-112 to Arg-123, Asp-141 to Met-146.	AR061: 7, AR089: 3 H0616: 5 and H0038: 1.		
HTENW53	907717	1316	1 - 243	4003	Arg-6 to Asp-13, Lys-70 to Trp-76.	H0038: 2, H0616: 2 and L0758: 2.		
HTENX77	771409	1317	168 - 359	4004	Glu-1 to Lys-11.	L0758: 10, L0439: 6, H0616: 2, L0803: 2, L0756: 2, L0455: 1, H0038: 1 and L0438: 1.		
HTENY21	870587	1318	383 - 553	4005	Ala-17 to Ser-22.	H0038: 1 and H0616: 1.		
HTENY35	884043	1319	2 - 1009	4006	Gln-1 to Ser-19, Glu-29 to Lys-35, Leu-58 to Phe-68, Cys-100 to Arg-107, Cys-113 to Cys-119, Phe-124 to Asn-139, Leu-157 to Glu-163, Ile-174 to Ile-180.	H0616: 3		

HTENZ16	917185	1320	203 - 454	4007	Pro-195 to Pro-204, Gly-228 to Glu-250, Ile-260 to Asp-266, Thr-273 to His-279, Cys-281 to Gly-291.	L0779: 9, L0758: 9, L0665: 8, H0616: 4, L0663: 4, H0038: 3, L0755: 3, L0717: 1, L0768: 1, L0666: 1, H0659: 1, H0670: 1, L0748: 1 and L0749: 1.			
HTENZ33	870591	1321	102 - 377	4008	Gln-24 to Glu-34, Ala-58 to Ser-64.	H0038: 1 and H0616: 1.			
HTENZ72	773024	1322	2 - 400	4009	Met-56 to Pro-67, Ser-82 to Tyr-87, Pro-111 to Ala-121.	H0616: 2 and H0038: 1.			
HTEOA90	787516	1323	24 - 329	4010	Arg-20 to Gln-27, Arg-37 to His-42, Pro-46 to His-55.	H0038: 1 and H0616: 1.			
HTEOD34	812307	1324	129 - 428	4011	Tyr-3 to Cys-9, Thr-20 to Ile-25, Gly-60 to Arg-67.	H0616: 2 and H0038: 1.			
HTEOE61	918635	1325	247 - 411	4012		H0616: 2 and H0038: 1.			
HTEOF31	793202	1326	258 - 632	4013	Gly-2 to Glu-13, Val-40 to Cys-79.	H0038: 1 and H0616: 1.			
HTEOF80	847224	1327	2 - 262	4014	Val-17 to Arg-23, Tyr-28 to Ser-34, Thr-41 to Cys-47.	AR061: 7, AR089: 3 H0616: 3	Xp22	300000, 300066, 300077,	

									300310, 301220, 302350, 304050, 304110, 306100, 309530, 309585, 312040
HTEOF85	768583	1328	113 - 364	4015				H0663: 1, H0644: 1, H0038: 1 and H0616: 1. H0616: 2	
HTEOF91	918571	1329	27 - 164	4016	Arg-31 to Asp-37.				
HTEOI36	870575	1330	3 - 410	4017	Pro-17 to Ala-25, Lys-33 to Arg-40, Arg-62 to Lys-68, Ala-79 to Val-93, Lys-106 to Asp-113.			AR089: 36, AR061: 21 H0038: 7, H0618: 1, H0253: 1 and H0616: 1.	
HTEOI53	810333	1331	11 - 295	4018	Arg-1 to Ile-8, Tyr-12 to Gly-29, Lys-34 to Ala-64, Lys-77 to Glu-91.			H0038: 1 and H0616: 1.	
HTEOK02	918590	1332	121 - 408	4019				H0616: 2 and H0038: 1.	
HTEON29	815852	1333	2 - 520	4020	Pro-27 to Ala-35.			AR061: 6, AR089: 3 H0038: 4, L0758: 3, H0616: 2, L0794: 2, L0747: 2, L0803: 1, L0789: 1 and L0590: 1.	
HTEON67	954114	1334	107 - 271	4021				H0038: 2 and H0616: 1.	



HTEOU45	915138	1335	320 - 529	4022			H0616: 22		
HTEOV90	870532	1336	22 - 438	4023		Pro-14 to Phe-23, Lys-111 to Lys-133.	L0766: 5, L0803: 3, H0616: 2, L0777: 2, L0470: 1, L0761: 1, L0764: 1, L0804: 1, L0805: 1, L0776: 1, L0789: 1 and L0750: 1.		
HTEOW02	918475	1337	3 - 266	4024		Ser-30 to His-36, Arg-54 to Arg-59.	H0616: 2		
HTEOW39	870566	1338	2 - 445	4025		Gly-38 to Val-44.	AR089: 17, AR061: 14 H0616: 2		
HTEOW85	969682	1339	2 - 490	4026		Arg-1 to Ala-13, Arg-99 to Arg-104, Thr-117 to Gln-124, Asn-132 to Gln-137, Thr-145 to His-155.	H0618: 3, H0616: 2 and H0253: 1.		
HTEPA08	958391	1340	147 - 605	4027		Tyr-34 to Glu-43.	L0758: 9, H0038: 1, H0616: 1 and S0042: 1.		
HTEPA27	872923	1341	43 - 393	4028		Pro-77 to Ser-83.	H0616: 3, L0747: 2, L0794: 1, L0803: 1 and L0779: 1.		
HTEPB66	772949	1342	204 - 515	4029		Asp-35 to Gly-40.	H0616: 3, L0758: 2, L0794: 1 and L0366: 1.		
HTEPB84	782248	1343	161 - 568	4030		Leu-2 to Gly-11.	H0616: 2 and H0038: 1.		
HTEPC76	767824	1344	140 - 328	4031		Pro-10 to Asn-16, Asn-38 to Arg-44.	H0616: 4, L0779: 1 and L0758: 1.		
HTEPC87	883021	1345	126 - 497	4032		Cys-5 to Thr-14.	H0616: 2		
HTEPD06	933299	1346	2 - 193	4033		His-7 to Gly-17, Gly-25 to Leu-36.	H0616: 4, L0756: 2 and H0038: 1.		

HTEPE28	932576	1347	2 - 640	4034	Asn-30 to Lys-43, Pro-58 to Glu-65, Arg-77 to Asn-85.	AR061: 5, AR089: 2 H0369: 1, H0038: 1, H0616: 1, L0593: 1 and L0595: 1.		
HTEPG15	812303	1348	3 - 395	4035	Gln-1 to Asn-9, Pro-14 to Leu-20, Leu-42 to Gly-47, Gln-56 to Arg-61, Pro-109 to Ser-114, Lys-119 to Thr-131.	L0752: 3, H0618: 1, H0616: 1, L0769: 1, L0803: 1, L0789: 1, L0439: 1, L0758: 1 and L0698: 1.		
HTEPH01	915301	1349	25 - 477	4036	Thr-2 to Ser-12, Arg-60 to Leu-67, Ala-72 to Thr-77, Pro-82 to Lys-91, Gly-96 to Ser-101, Glu-110 to Pro-118, Gln-124 to Leu-129, Gln-132 to Ser-138.	H0616: 3 and H0038: 1.		
HTEPJ09	956200	1350	305 - 1216	4037	Arg-1 to Asn-11, His-40 to Arg-45.	H0616: 2 and L0758: 1.		
HTEPJ19	918599	1351	37 - 345	4038	Arg-1 to Ser-9.	H0616: 2		
HTEPJ79	774212	1352	27 - 122	4039		H0038: 1 and H0616: 1.		
HTEPK40	939675	1353	209 - 631	4040	Gly-5 to Pro-15, Ser-23 to His-32.	H0616: 5, L0758: 5 and H0038: 1.		
HTEPM33	870561	1354	1 - 735	4041	Pro-8 to Gly-26, Cys-54 to Cys-66, Gly-73 to His-85.	AR061: 25, AR089: 5 L0758: 3, H0616: 2, H0038: 1 and L0779: 1.		
HTEPM52	806471	1355	171 - 326	4042		H0616: 2		
HTEPN07	952243	1356	3 - 311	4043	Leu-12 to Pro-17,	H0616: 2 and H0038:		

						Pro-24 to Gly-29, Ser-34 to Gly-39.	1.			
HTEPP23	836572	1357	1 - 192	4044		Asn-6 to Asp-16.	H0616: 2, L0779: 2, H0038: 1 and L0758: 1.			
HTEPP29	917207	1358	1 - 372	4045		Gly-33 to Gly-38, Gln-61 to His-66.	H0038: 1 and H0616: 1.			
HTEPP30	947107	1359	12 - 641	4046		Ala-35 to Glu-41, Ile-54 to Glu-74, Lys-80 to Leu-87.	H0616: 3 and H0038: 1.			
HTEPP32	785803	1360	3 - 866	4047		Gln-8 to Cys-17, Cys-20 to Gln-26, Thr-61 to Lys-68, His-75 to Gly-83, Asn-88 to Gln-104, Pro-118 to Leu-126, Gln-131 to Glu-138.	H0616: 4 and H0038: 3.			
HTEPP92	790869	1361	3 - 545	4048		Lys-86 to Lys-91, Lys-107 to Lys-139, Leu-155 to Asn-162.	H0038: 1 and H0616: 1.			
HTEPR90	787499	1362	1 - 168	4049			H0038: 2 and H0616: 2.			
HTEPT25	870509	1363	2 - 238	4050		Gly-42 to Gly-47.	H0616: 2			
HTEPT75	870637	1364	42 - 518	4051		Pro-66 to Ser-74.	H0616: 2 and H0038: 1.			
HTEPU01	915134	1365	533 - 670	4052			H0616: 2			
HTEPV02	917406	1366	1 - 471	4053		Ser-9 to Ser-17, Phe-21 to Leu-45.	AR061: 6, AR089: 2 H0616: 3, L0758: 2, L0768: 1, L0792: 1 and L0779: 1.			
HTEPX32	870698	1367	91 - 699	4054		Ser-10 to Gly-15,	AR089: 11, AR061: 2			

							Pro-20 to Ser-27, Glu-34 to Gly-41, Ala-45 to Trp-50, Pro-79 to Gly-88.	H0038: 6, H0616: 6, L0794: 4, L0768: 1 and L0758: 1.		
HTEPZ10	963433	1368	274 - 543	4055			Pro-9 to Ser-19, Pro-51 to Asp-57.	H0616: 2 and L0758: 2.		
HTEPZ18	888470	1369	50 - 502	4056			Lys-2 to Gly-11.	H0618: 1 and H0616: 1.		
HTEQB03	922941	1370	2 - 151	4057			Pro-30 to Cys-35, Thr-41 to Ser-47.	H0616: 4		
HTEQD40	915198	1371	2 - 490	4058			Met-11 to Lys-28.	L0758: 7, H0618: 1, H0616: 1, L0794: 1 and L0779: 1.		
HTEQD69	918579	1372	133 - 321	4059			Thr-39 to Asn-45.	H0616: 2 and H0038: 1.		
HTEQE87	958354	1373	205 - 633	4060			His-16 to Ser-21, Val-30 to Asn-40, Leu-54 to Pro-64.	H0038: 2 and H0616: 1.		
HTEQG56	881004	1374	10 - 426	4061			Pro-31 to Glu-45, Ala-52 to Lys-58, Met-78 to Lys-89.	H0616: 3 and H0038: 1.		
HTEQI54	853971	1375	189 - 422	4062			Thr-1 to Asn-6, Pro-11 to Phe-19, Arg-21 to Asn-27.	H0616: 2, L0803: 1 and L0774: 1.		
HTEQJ14	870525	1376	158 - 424	4063				H0038: 2 and H0616: 1.		
HTEQJ42	806495	1377	90 - 308	4064			Gln-4 to Ser-9, Ala-23 to Glu-29, Phe-65 to Ser-71.	H0038: 1 and H0616: 1.		
HTEQO81	806504	1378	1 - 144	4065				H0038: 1 and H0616:		

HTEQP45	966141	1379	1 - 141	4066	Lys-1 to Phe-10.	1.	H0616: 4		
HTEQQ82	932301	1380	254 - 24	4067	Asp-5 to Asp-14.	1.	H0616: 3 and L0758:		
HTEQR15	939641	1381	108 - 590	4068	Thr-17 to Leu-22.		AR089: 10, AR061: 3 H0253: 8, H0038: 4, H0616: 3, H0618: 2, L0758: 2 and L0779: 1.		
HTEQR94	966486	1382	77 - 388	4069	Asn-83 to Ser-88.		L0758: 6, H0616: 2 and L0794: 2.		
HTEQT63	924799	1383	193 - 1311	4070			L0758: 3, H0038: 1 and H0616: 1.		
HTLAB19	530577	1384	3 - 281	4071	Asp-32 to Gln-37.		H0253: 2		
HTLAB44	530579	1385	3 - 266	4072	Ala-6 to Gly-25.	3.	H0618: 4 and H0253:		
HTLAB73	575019	1386	1 - 333	4073	Gly-42 to Arg-47.		H0253: 2		
HTLAC81	679414	1387	2 - 163	4074	Leu-2 to Cys-8, Gly-32 to Arg-39.		H0253: 3		
HTLAC87	546469	1388	23 - 154	4075	Ala-1 to Arg-6, Met-14 to Thr-32.		H0038: 164, H0253: 42, H0150: 2, H0549: 1 and S0042: 1.		
HTLAD21	761758	1389	2 - 298	4076	Ser-5 to Asn-12, Leu-63 to Gly-71.		L0758: 4, H0253: 2, H0616: 2, L0649: 1, L0666: 1, L0663: 1 and L0780: 1.		
HTLAD38	421550	1390	86 - 529	4077	Phe-12 to Leu-22, Ser-26 to Tyr-32, Phe-53 to Asn-59, Tyr-68 to Leu-73,		L0758: 5, H0253: 4, L0794: 4, H0618: 2, H0038: 1, H0616: 1 and L0768: 1.		

HTLAF84	836390	1391	1 - 444	4078	Gln-96 to Gly-102. Pro-32 to Thr-48, Arg-102 to Pro-109.	H0253: 2 and L0777: 1.		
HTLAV67	530742	1392	36 - 221	4079	Ser-39 to Gly-45.	H0253: 3		
HTLBD12	506739	1393	2 - 331	4080	Ala-2 to Pro-8, Pro-57 to Trp-67, Cys-69 to Gly-74.	H0253: 2		
HTLBE55	967408	1394	2 - 232	4081	Glu-6 to Thr-15, Ser-21 to His-34, Arg-53 to Ala-64.	H0253: 1, H0038: 1 and H0616: 1.		
HTLBE82	780116	1395	209 - 481	4082	Ser-1 to Gly-8, Thr-15 to Thr-23, Pro-45 to Pro-53.	L0366: 3, H0618: 2, H0253: 1 and L0754: 1.	9q31-q34	109400, 125270, 125270, 128100, 132800, 132800, 137350, 186855, 191100, 215700, 223360, 223900, 253800, 253800, 268900, 278700, 601850, 602088
HTLBF14	971661	1396	3 - 590	4083	Glu-21 to Gln-27, Ser-30 to Lys-37.	H0616: 2, H0618: 1 and H0253: 1.		

HTLBG83	527942	1397	96 - 200	4084			H0253: 2		
HTLCA95	911655	1398	38 - 1096	4085			AR061: 373, AR089: 188 H0253: 3, H0618: 2, H0038: 2, H0616: 1 and L0758: 1.		
HTLCG77	772644	1399	2 - 112	4086		Gly-1 to Ile-6, Gly-12 to Ile-27.	L0758: 5, H0616: 3, H0038: 2, L0794: 2 and H0253: 1.		
HTLCX76	767667	1400	2 - 277	4087		Leu-58 to Arg-68.	H0253: 2		
HTLCY27	682208	1401	2 - 301	4088		Arg-9 to Cys-18, Arg-34 to Gly-40, Glu-47 to Asp-54.	H0253: 1, L0794: 1, L0766: 1, L0803: 1, H0670: 1 and L0747: 1.		
HTLCY54	908832	1402	134 - 934	4089		Arg-1 to Arg-6, Ala-49 to Tyr-58, Pro-67 to Lys-80, Ser-92 to Trp-108.	AR061: 5, AR089: 5 H0253: 4, H0618: 3, L0758: 3, L0779: 2 and L0794: 1.		
HTLCZ48	572959	1403	1 - 162	4090		His-1 to Gly-6.	H0253: 2		
HTLCZ96	815897	1404	17 - 286	4091			L0758: 4, L0794: 2, L0617: 1, H0253: 1, H0038: 1, L0789: 1 and L0779: 1.		
HTLDA58	828115	1405	2 - 271	4092		Ser-6 to Ser-11.	H0253: 2		
HTLDE53	780842	1406	72 - 497	4093		Asn-1 to Glu-6, Gly-17 to His-28, Glu-33 to Ser-39, Pro-41 to Lys-51, Pro-56 to Glu-69, Ser-83 to Lys-90, Thr-97 to Ser-103,	L0758: 11, H0253: 3, H0550: 1 and H0616: 1.		

HTLDE64	908613	1407	83 - 427	4094	Arg-121 to Asp-131. Glu-15 to Leu-20, Leu-24 to Ser-47.	AR089: 25, AR061: 11 H0253: 2 and H0618: 1.		
HTLDE95	616724	1408	86 - 298	4095		H0253: 2		
HTLDF33	909254	1409	3 - 599	4096	Pro-7 to Gly-13.	AR061: 7, AR089: 3 L0758: 6, L0789: 2, L0779: 2, H0253: 1, L0809: 1, L0666: 1 and H0648: 1.		
HTLDG55	911645	1410	1 - 192	4097	Gly-1 to Arg-10.	H0253: 2		
HTLDH65	839795	1411	3 - 431	4098		H0553: 3 and H0253: 1.		
HTLDI90	835850	1412	248 - 472	4099		H0618: 1 and H0253: 1.		
HTLDO94	915223	1413	90 - 458	4100	Met-12 to Asp-18, Tyr-20 to Gly-31, Lys-38 to Trp-47.	H0253: 2, H0188: 1 and H0038: 1.		
HTLDP77	920546	1414	1 - 573	4101	Gly-1 to Gly-9, Gln-15 to Arg-20, Cys-53 to Arg-59, Arg-84 to Glu-89, Pro-105 to Glu-113.	H0253: 3 and H0618: 2.		
HTLDQ25	870057	1415	1 - 834	4102	Ser-3 to Ser-16.	H0618: 11, H0253: 10, H0616: 6, L0758: 5, H0038: 4, L0768: 2 and H0090: 1.		
HTLDS55	891322	1416	2 - 1171	4103	Ala-1 to Gln-13, Pro-19 to Leu-27, Asp-34 to Pro-40,	AR061: 7, AR089: 2, AR054: 2, AR051: 2, AR050: 2		



						Ser-45 to Ser-52, Lys-105 to Pro-112, Pro-146 to Trp-158, Arg-181 to Arg-189, Arg-241 to Arg-248, Asp-285 to Asn-291, Gln-328 to Ile-333, Gln-369 to Thr-375, Arg-380 to Phe-390.	H0618: 5, L0758: 4, H0038: 3, H0253: 2, H0553: 1, H0616: 1, L0789: 1, L0663: 1 and L0779: 1.		
HTLDT05	909752	1417	2 - 328	4104		Gly-3 to Ser-8.	AR089: 11, AR061: 7 H0253: 2, L0439: 1 and L0599: 1.		
HTLDT81	952265	1418	1 - 465	4105		Pro-3 to Pro-8, Glu-22 to Gln-29.	H0253: 2 and H0618: 1.		
HTLDU05	911649	1419	2 - 469	4106		Pro-89 to Ala-97.	AR061: 8, AR089: 7 H0253: 3, H0618: 1 and L0758: 1.	9q31 109400, 132800, 132800, 186855, 223900, 253800, 253800, 278700, 602088	
HTLDV31	867748	1420	61 - 309	4107		Gln-16 to Gly-35, Gly-59 to Ser-74.	H0253: 1 and S0152: 1.		
HTLDX88	791684	1421	148 - 636	4108		Pro-5 to Gly-10, Gly-24 to Ala-33, Pro-88 to Pro-95, Pro-106 to His-114.	H0618: 2 and H0253: 1.		
HTLDY85	573746	1422	3 - 425	4109		Lys-50 to Ala-55,	H0038: 2 and H0253:		

						Thr-99 to Glu-104, Arg-116 to Arg-122, Lys-129 to Thr-136.	1.			
HTLDZ14	573401	1423	174 - 347	4110			H0253: 2			
HTLEB14	573464	1424	1 - 414	4111		Gly-63 to Arg-71.	H0618: 4 and H0253: 3.			
HTLED72	906989	1425	102 - 287	4112		Leu-1 to Pro-7.	H0253: 2			
HTLEF94	870258	1426	33 - 239	4113			H0253: 2			
HTLEG65	870154	1427	177 - 1181	4114			AR051: 12, AR054: 10, AR050: 8 H0616: 6, H0618: 2, H0253: 2 and H0038: 2.			
HTLEG91	870257	1428	1 - 111	4115			H0253: 2			
HTLEH30	934287	1429	1 - 528	4116		Gly-1 to His-8, Glu-26 to Gly-33.	H0253: 2			
HTLEI47	573460	1430	124 - 417	4117		Glu-58 to Thr-63.	H0253: 3			
HTLEJ11	973302	1431	2 - 802	4118		Tyr-52 to Gln-60, Phe-86 to Ala-94, Lys-111 to Arg-118, His-193 to Tyr-198.	AR061: 3, AR089: 1 H0618: 3 and H0253: 1.	15q13-qter		
HTLEJ93	960314	1432	2 - 307	4119		His-22 to Lys-36, Asp-51 to Lys-59, Gln-68 to Leu-83.	H0253: 5 and H0618: 3.			
HTLEK64	506747	1433	2 - 331	4120		Ala-1 to Cys-13, Arg-32 to Ala-37.	H0253: 2			
HTLEL01	917022	1434	2 - 202	4121		Pro-3 to Gly-9.	H0253: 1 and H0616: 1.			
HTLEL03	575080	1435	2 - 106	4122			H0253: 2	3p21.3	116806, 120120,	

								120120, 120120, 120436, 120436, 120436, 138320, 168468, 182280, 600163
HTLEL07	953712	1436	58 - 555	4123	Ala-29 to Asn-37, Lys-64 to Thr-77, Ile-97 to Arg-126.	H0253: 1 and H0617: 1.		
HTLEL31	669950	1437	3 - 143	4124	Pro-6 to Glu-13, Arg-18 to Pro-30.	H0253: 2	7q22	126650, 126650, 154276, 173360, 173360, 602136, 602136, 602136, 602447
HTLEM46	719160	1438	1 - 456	4125		H0253: 2, L0777: 2 and L0759: 1.		
HTLEO50	506649	1439	2 - 265	4126	Ser-2 to Pro-10.	H0253: 1 and H0038: 1.		
HTLEP16	574942	1440	3 - 443	4127		H0253: 2, L0794: 2 and S0042: 1.		
HTLEQ07	953706	1441	3 - 605	4128	His-7 to Ile-32, Glu-82 to Glu-87, Lys-103 to Gly-108.	H0618: 2 and H0253: 1.		

HTLES43	573403	1442	49 - 216	4129			H0253: 2		
HTLES54	574884	1443	1 - 282	4130	Pro-10 to Gln-19, Pro-46 to Ile-59, Thr-64 to Leu-70.		H0038: 2 and H0253: 1.		
HTLET56	911654	1444	95 - 826	4131	Ser-54 to Lys-61, Pro-118 to Lys-128, Thr-208 to Ser-213, Ser-218 to Ala-227, Pro-230 to Ser-236, Pro-238 to Ser-244.		AR061: 6, AR089: 5 H0253: 18, H0618: 7, L0794: 3, H0038: 1, H0616: 1, L0788: 1 and L0758: 1.		
HTLET78	836820	1445	2 - 826	4132	Leu-11 to Lys-18, Phe-107 to Gly-114, Glu-121 to Asn-128, Met-146 to Pro-153.		AR061: 4, AR089: 2 H0618: 10, H0253: 5, L0758: 5, L0664: 1, L0756: 1, L0779: 1 and L0698: 1.		
HTLET93	573454	1446	1 - 111	4133			H0253: 2		
HTLEV33	527956	1447	1 - 273	4134	Ala-8 to Gly-17, Pro-25 to His-34.		L0794: 5, H0253: 3, H0618: 2, H0616: 2, L0758: 2 and L0787: 1.		
HTLEV95	883332	1448	52 - 414	4135	His-1 to Thr-6, His-14 to Cys-58, Cys-70 to Ala-77, Pro-85 to Cys-109, Pro-116 to Glu-121.		H0616: 14, H0618: 8, L0779: 4, H0253: 3, H0038: 3, L0790: 1 and L0758: 1.		
HTLEW12	870255	1449	2 - 346	4136			H0253: 2, H0617: 2 and H0618: 1.		
HTLEW21	573458	1450	3 - 197	4137			H0253: 2		
HTLEY11	967309	1451	2 - 130	4138	Arg-1 to Gly-21, Gln-38 to Asp-43.		H0253: 2		
HTLEY91	775310	1452	5 - 226	4139	Pro-38 to Trp-43,		H0253: 2		

						Pro-47 to Lys-54, Gly-62 to Arg-72.				
HTLEZ14	791662	1453	2 - 334	4140		Asn-18 to Pro-44, Val-64 to Phe-70.	4140		H0618: 4 and H0253: 3.	
HTLEZ15	934288	1454	3 - 251	4141		Pro-5 to His-12, Glu-30 to Thr-36.	4141		H0618: 2 and H0253: 2.	
HTLEZ32	870261	1455	3 - 209	4142			4142		H0253: 2	
HTLFA74	934172	1456	279 - 707	4143		Ser-20 to Glu-26, Gly-31 to Ala-46, Thr-62 to His-67, Arg-72 to Pro-81.	4143		H0253: 2 and H0618: 1.	
HTLFC20	917128	1457	409 - 1041	4144		Ala-4 to Trp-10, Glu-27 to Gln-32, Gly-115 to Gly-122.	4144		H0618: 3 and H0253: 3.	
HTLFE01	917033	1458	98 - 313	4145		Asn-7 to Val-12, Leu-15 to Ser-23.	4145		H0253: 4 and H0038: 1.	
HTLFE05	954984	1459	3 - 812	4146		His-1 to Cys-6, Glu-24 to Gly-29, Gln-53 to Asp-59, Gly-80 to Pro-86, Glu-142 to Ser-148, Ser-154 to Val-160, Pro-163 to Gln-180, Val-195 to Pro-200, Lys-205 to Ser-213, Ala-222 to Glu-228, Asp-239 to Gly-270.	4146	7q22	H0253: 5, H0618: 4, H0038: 1 and H0616: 1.	126650, 126650, 154276, 173360, 173360, 602136, 602136, 602136, 602447
HTLFE20	934278	1460	80 - 475	4147		Gly-11 to Val-29, Gly-31 to Glu-38, Ala-40 to Arg-48,	4147		H0253: 8 and H0618: 7.	

HTLFI28	775392	1461	2 - 430	4148	Gly-55 to Val-65, Leu-70 to Thr-76. Pro-24 to Arg-31, Ile-66 to Leu-72, Asp-90 to Glu-98.	H0253: 3 and H0038: 2.		
HTLFI39	953730	1462	2 - 622	4149	Ala-15 to Asp-23, Thr-44 to Tyr-52.	AR089: 19, AR061: 13 H0618: 8 and H0253: 4.	126650, 126650, 154276, 173360, 173360, 602136, 602136, 602136, 602447	
HTLFI83	781303	1463	19 - 513	4150	Asp-13 to Leu-26, Val-38 to Val-76.	H0253: 1 and H0038: 1.		
HTLFI39	573462	1464	2 - 343	4151	Gln-7 to Phe-13, Leu-24 to Val-37, Pro-50 to Leu-65.	H0253: 2		
HTLGD25	870136	1465	28 - 600	4152	Gly-3 to Gly-9, Leu-51 to Gln-58, Leu-67 to Ser-74, His-100 to Pro-106, Arg-132 to Arg-138.	AR061: 3, AR089: 1 H0618: 4, H0253: 4, H0616: 2, L0758: 2 and H0038: 1.		
HTLGD69	835493	1466	287 - 652	4153	His-27 to Ser-39, His-47 to Pro-55.	L0758: 2, H0618: 1, H0253: 1, H0616: 1 and L0779: 1.		
HTLGG36	789656	1467	2 - 574	4154	Thr-13 to Ser-21, Arg-26 to His-44, Ala-85 to Cys-91,	H0618: 4, L0779: 1 and L0758: 1.		

						Thr-104 to Thr-121, Gly-156 to Arg-163.				
HTLGK55	868309	1468	1 - 483	4155					H0618: 2, H0617: 1 and L0743: 1.	
HTLGM02	964878	1469	62 - 766	4156		Lys-1 to Gly-12, Glu-32 to Phe-41, Arg-69 to Leu-81, Pro-188 to Ile-195.			H0618: 2	
HTLGM07	952254	1470	3 - 761	4157		Arg-1 to Glu-6, Ile-15 to Phe-23, Gly-59 to Phe-72, Pro-95 to Trp-112, Phe-117 to Pro-129.			AR089: 21, AR061: 16 H0618: 32, H0253: 13, H0616: 6, L0758: 3, H0038: 2, L0794: 2, H0009: 1, H0688: 1, L0769: 1, L0372: 1, L0646: 1, L0363: 1, L0766: 1, L0790: 1, L0665: 1, H0670: 1 and L0779: 1.	
HTLGT62	918606	1471	2 - 547	4158		Asn-4 to Thr-10, Pro-46 to Asp-51.			H0618: 9, H0253: 1 and L0758: 1.	
HTLGW17	958208	1472	1 - 768	4159		Arg-39 to Asn-44, Arg-55 to Gly-62, Arg-98 to Ile-103.			H0618: 3 and H0253: 3.	
HTLGX90	870528	1473	61 - 906	4160		Pro-41 to Gly-57, Leu-76 to Gly-83, Pro-87 to Ser-95, Glu-97 to Pro-106, Ile-122 to Glu-128, Gln-152 to Arg-166, Thr-180 to Arg-187,			L0748: 4, H0618: 3, L0751: 3, L0749: 2, L0777: 2, H0038: 1, H0616: 1, L0772: 1 and L0775: 1.	

HTLHC14	908428	1474	3 - 503	4161	Leu-191 to Pro-199, Glu-231 to Cys-241, Val-248 to Asp-255. Gly-38 to Phe-51, Pro-74 to Trp-91, Phe-96 to Ala-127, Glu-130 to Gly-148.	AR061: 7, AR089: 4 H0618: 32, H0253: 13, H0616: 6, L0758: 3, H0038: 2, L0794: 2, H0009: 1, H0688: 1, L0769: 1, L0372: 1, L0646: 1, L0363: 1, L0766: 1, L0790: 1, L0665: 1, H0670: 1 and L0779: 1.		
HTLHE72	963471	1475	62 - 508	4162		H0618: 3 and H0253: 1.		
HTLHL82	958334	1476	186 - 1103	4163	Gln-1 to Trp-27.	H0253: 11, H0618: 8, L0779: 3, L0758: 3 and L0768: 1.		
HTLHO94	968685	1477	298 - 164	4164	Lys-36 to Glu-45.	H0038: 2, L0747: 2, H0618: 1, L0665: 1, L0779: 1 and L0758: 1.		
HTLHP32	933335	1478	87 - 455	4165	Phe-6 to Ala-12, Arg-24 to Arg-35, Leu-66 to Phe-84.	AR089: 35, AR061: 7 H0618: 2		
HTLHP52	926980	1479	11 - 181	4166	Glu-37 to Gln-42.	H0618: 2		
HTLHP80	870156	1480	350 - 604	4167		H0618: 2		
HTLHT15	946586	1481	1 - 381	4168	Tyr-31 to Arg-42, Met-63 to Leu-69, Tyr-114 to His-123.	H0618: 2		
HTLHT24	870254	1482	21 - 893	4169	Pro-1 to Ala-10,	H0618: 26, H0253: 20		



HTLHU04	926950	1483	2 - 943	4170	Val-27 to Gly-42, Asp-61 to Asp-66, Ser-81 to Ala-88.	and L0758: 1.		
HTLHV67	936139	1484	2 - 700	4171	Gln-10 to Ile-18, Arg-41 to Ala-59, His-115 to Lys-128, Lys-143 to Glu-151, Thr-164 to Glu-169.	L0758: 8, H0618: 4, H0253: 1, H0038: 1 and L0769: 1.		
HTLHZ08	958321	1485	1 - 675	4172	Glu-2 to Thr-7, Arg-64 to Lys-72, Glu-77 to Leu-83, Arg-93 to Ser-102, Ile-118 to Gln-123.	H0618: 3	15q23-q25	118485, 151670, 231680, 272800, 272800, 272800, 276700, 600374, 601780
HTLHZ10	963475	1486	2 - 241	4173	Ser-134 to Glu-139, Thr-154 to Leu-160.	H0618: 2		
HTLIA92	784817	1487	96 - 656	4174	Arg-1 to Gln-13, Phe-16 to Pro-62.	H0618: 1 and H0253: 1.		
HTLID36	945891	1488	1 - 417	4175	Pro-7 to Lys-15, Asp-21 to Ser-28, Gln-53 to Ala-58, Thr-115 to Asn-127.	H0618: 2, L0764: 2, H0253: 1, L0492: 1, H0673: 1 and H0038: 1.		
HTLIK11	966043	1489	133 - 312	4176	Thr-10 to Thr-18, Pro-58 to Val-65.	AR089: 7, AR061: 7 H0618: 1 and H0038: 1.		
					Pro-11 to His-17, Pro-27 to Asp-36.	H0618: 2		

					Ser-38 to His-43.				
HTLP19	958351	1490	3 - 899	4177	Ser-25 to Thr-32, His-50 to Lys-56, Glu-111 to Asp-116, Trp-156 to Lys-161, Leu-189 to Arg-202, Asp-258 to Thr-264.		L0758: 6, H0616: 3, H0038: 2 and H0618: 1.		
HTLIQ09	931046	1491	501 - 644	4178			H0618: 2		
HTLIR30	870115	1492	3 - 659	4179	Leu-11 to Leu-17, Pro-22 to Leu-27, Pro-40 to Lys-46, Arg-66 to Pro-73, Thr-91 to Ser-98, Val-102 to Lys-108, Gly-125 to Glu-130, Leu-138 to Asp-144, Arg-149 to Arg-158.		H0618: 1 and H0253: 1.		
HTLIU76	946300	1493	46 - 609	4180	Pro-13 to Ala-18, His-30 to Gln-37, Gly-49 to Ala-66, Ala-80 to Lys-92, Glu-98 to Asp-103, His-119 to Thr-126.		AR089: 9, AR061: 8 L0758: 12, H0618: 6, H0038: 3, H0253: 1, H0050: 1, L0151: 1 and L0768: 1.		
HTLIV78	947234	1494	618 - 97	4181	Pro-18 to Asp-23, Arg-110 to Gln-122.		AR089: 9, AR061: 7 L0758: 10, L0794: 3, H0618: 2, H0038: 2, H0253: 1, L0768: 1 and L0789: 1.		
HTLIY52	942161	1495	1 - 1368	4182			AR061: 0, AR089: 0 H0618: 64, H0253: 52.		

HTLJA23	953729	1496	2 - 814	4183	Thr-50 to Tyr-58, Gly-155 to Gln-161, Thr-164 to Gln-175.	L0758: 6, L0779: 2, H0392: 1, H0038: 1, L0761: 1, L0803: 1, L0806: 1 and L0697: 1. H0618: 8 and H0253: 4.	7q22	126650, 126650, 154276, 173360, 173360, 602136, 602136, 602136, 602447
HTLJA24	934279	1497	3 - 572	4184	Ile-1 to Trp-9, Gly-35 to Val-53, Gly-55 to Glu-62, Ala-64 to Arg-72, Gly-79 to Arg-85.	H0618: 2		
HTLJC71	922923	1498	3 - 1355	4185	His-1 to Phe-9, Cys-13 to Thr-18, Pro-35 to Gly-48, Glu-61 to Pro-68, Lys-105 to Ala-136, Thr-144 to Gln-154, Leu-163 to Gly-171, Thr-205 to Gln-222, Pro-251 to Gln-257.	AR061: 7, AR089: 5 H0618: 12, H0253: 8, H0038: 6, L0758: 6, L0779: 5, H0616: 3, T0041: 1, L0776: 1, S0274: 1 and H0543: 1.		
HTLJD35	967336	1499	1 - 192	4186	Cys-5 to Ser-15, Pro-36 to Pro-44.	H0618: 1 and H0253: 1.		
HTLJD88	953714	1500	161 - 760	4187	Arg-15 to Glu-25,	H0253: 5 and H0618:		

					Lys-35 to Val-41, Gln-70 to Pro-100.	2.			
HTLJJ75	924755	1501	1 - 921	4188	Gln-1 to Thr-12.	AR089: 11, AR061: 9 H0253: 7, H0618: 6, L0794: 2, L0779: 2, L0595: 2, H0687: 1, L0438: 1, L0741: 1 and L0758: 1.			
HTLJL23	922994	1502	2 - 619	4189	Leu-9 to Ser-14.	H0618: 3, H0038: 3, H0616: 3 and H0253: 2.			
HTTAD55	835652	1503	132 - 245	4190		H0040: 3			
HTTAE49	723331	1504	74 - 160	4191		H0040: 2			
HTTAH87	509574	1505	2 - 232	4192		H0040: 2			
HTTAJ35	707750	1506	3 - 194	4193	Leu-10 to Lys-16, Asn-43 to Ser-49.	L0770: 3, L0766: 3, L0759: 3, L0790: 2, H0659: 2, H0040: 1, L0776: 1, L0663: 1, L0665: 1, L0752: 1 and L0755: 1.			
HTTAJ50	509657	1507	1 - 261	4194		H0040: 2			
HTTAN57	509453	1508	29 - 274	4195	Gly-21 to Gly-27, Pro-38 to Gly-49, Ser-68 to Asp-73.	H0040: 2			
HTTAS96	961057	1509	91 - 255	4196	Arg-7 to Cys-13, Ser-16 to Arg-21, Ala-28 to Gly-33.	H0040: 2			
HTTAU82	797726	1510	61 - 309	4197	Pro-6 to Asn-13, Thr-25 to Gly-34.	H0040: 2			
HTTBE25	509128	1511	1 - 156	4198		H0040: 2			

HTTBH34	530565	1512	177 - 326	4199	Pro-14 to Gly-20, Leu-23 to Asn-33.	H0040: 1, L0438: 1 and H0658: 1.		
HTTBH41	530562	1513	106 - 264	4200	Ser-16 to Lys-22, Ser-29 to Gln-35.	H0031: 1 and H0040: 1.		
HTTBH54	530563	1514	114 - 266	4201		H0040: 2		
HTTBJ94	530564	1515	3 - 263	4202	Thr-3 to Arg-14.	AR061: 4, AR089: 3 H0040: 2		
HTTBN67	578085	1516	54 - 176	4203		H0040: 2		
HTTCA15	869705	1517	2 - 262	4204	Glu-74 to Tyr-79.	H0040: 2		
HTTCD03	925390	1518	248 - 391	4205	Asn-1 to Ser-13.	H0040: 2		
HTTCD71	530393	1519	3 - 101	4206		H0040: 2		
HTTCL35	529672	1520	72 - 185	4207		H0040: 2, L0766: 1 and L0758: 1.		
HTTCT34	973210	1521	3 - 1049	4208	Phe-86 to Tyr-94, Val-149 to Lys-155, Trp-169 to Asn-179, Thr-189 to Glu-197.	AR061: 5, AR089: 2 H0040: 3		
HTTDF50	526385	1522	191 - 298	4209		H0040: 2		
HTTDF90	917155	1523	78 - 260	4210		H0040: 3		
HTTDG36	968131	1524	26 - 280	4211	Gly-13 to Gly-19, Pro-38 to Gly-50, Glu-67 to Gly-73.	H0040: 2		
HTTDI21	869686	1525	3 - 188	4212		H0040: 1 and H0634: 1.		
HTTDJ65	973307	1526	155 - 364	4213	Ser-2 to Val-16, Pro-50 to Trp-56.	H0040: 3		
HTTDL38	573641	1527	47 - 136	4214		H0040: 2		
HTTDL45	523452	1528	3 - 89	4215		H0040: 3 and L0792: 1.		

HTTDL89	959837	1529	183 - 341	4216			H0040: 2		
HTTDN40	734318	1530	52 - 387	4217	Gln-8 to Ser-13, Asp-20 to Tyr-27.		H0040: 2		
HTTDN85	783444	1531	89 - 313	4218			H0040: 2		
HTTDO19	908937	1532	1 - 333	4219	Thr-3 to Lys-9, Gly-14 to His-26, His-30 to Lys-37, Lys-43 to Ser-49.		AR089: 16, AR061: 9 H0040: 2		
HTTDO37	573685	1533	150 - 440	4220	Phe-25 to Phe-38.		H0040: 2 and H0670: 1.		
HTTDR91	790336	1534	110 - 280	4221	Ile-3 to Lys-9.		H0040: 2 and L0766: 1.		
HTTDR92	573666	1535	190 - 330	4222	Gly-8 to His-21.		H0040: 2		
HTTDS02	920589	1536	217 - 387	4223			H0040: 2		
HTTDX84	921100	1537	1 - 480	4224	Pro-33 to Arg-43, Ala-48 to Tyr-57.		H0253: 3, L0758: 2, H0618: 1, H0038: 1 and H0040: 1.		
HTTDZ54	692608	1538	125 - 298	4225			H0040: 2		
HTTDZ91	523206	1539	2 - 313	4226	Ser-11 to Ala-19, Lys-27 to Ala-33.		H0618: 1 and H0040: 1.		
HTTEB33	573719	1540	227 - 349	4227			H0040: 2		
HTTEH58	747943	1541	149 - 286	4228			H0040: 2		
HTTEL50	745985	1542	102 - 209	4229			H0040: 2		
HTTEU68	967819	1543	2 - 766	4230	Lys-8 to Val-20, Ser-72 to Ala-77, Ala-84 to Ser-92, Leu-110 to Lys-119.		H0040: 2, L0439: 2, L0438: 1 and L0747: 1.		
HTTEV62	573614	1544	85 - 285	4231	Ser-1 to Gln-7, Arg-9 to Glu-14,		H0040: 2, H0616: 1, L0794: 1, L0779: 1 and		

						Pro-16 to Val-24, Arg-35 to Asp-40.	L0758: 1.		
HTTEY64	974107	1545	207 - 464	4232			H0040: 4		
HTTEY67	917903	1546	598 - 804	4233		Ala-1 to Ala-7, Gly-53 to Lys-67.	H0040: 2, H0435: 1, L0439: 1 and L0759: 1.		
HTTEZ34	771602	1547	168 - 329	4234		Arg-40 to Asn-45.	H0040: 2		
HTTFA16	870198	1548	1 - 408	4235			H0040: 1, S0150: 1 and L0601: 1.		
HTTFB60	869666	1549	2 - 220	4236			H0040: 2		
HTTFG35	778426	1550	1 - 183	4237		Asp-14 to Gln-22.	H0040: 5		
HTTFG83	974284	1551	235 - 441	4238			H0040: 2, H0169: 1 and L0753: 1.		
HTTFH70	757358	1552	139 - 285	4239			H0040: 2		
HTTFK90	787599	1553	36 - 263	4240		Arg-25 to Trp-32.	H0040: 2, L0794: 2, L0659: 1, L0809: 1, L0779: 1 and L0752: 1.		
HTTFL89	974346	1554	99 - 419	4241		Gly-15 to Gly-21, Pro-31 to Pro-46.	H0040: 3		
HTTFM17	750942	1555	52 - 219	4242			H0040: 2, L0805: 1 and L0758: 1.	17q	
HTTFM66	950051	1556	141 - 1079	4243			AR061: 6, AR089: 2 H0040: 2		
HTTFS59	825922	1557	1 - 273	4244			H0040: 2, L0748: 2, L0749: 2 and L0766: 1.	11p11.2-p11.1 133701, 168500, 171650, 176930, 176930, 600623, 600811,	

HTTFT08	934460	1558	34 - 207	4245	Asn-23 to Gln-29, Arg-37 to Asn-43.	H0040: 3	600958
HTTFV93	925544	1559	47 - 169	4246	Asp-36 to Lys-41.	H0040: 2	
HTTFW03	923105	1560	53 - 202	4247		H0615: 1 and H0040: 1.	
HTTFX21	924775	1561	63 - 212	4248		L0748: 13, L0770: 4, L0777: 3, H0040: 2, L0794: 2, L0528: 2, L0789: 2, L0758: 2, H0685: 1, H0688: 1, L0662: 1, L0768: 1, L0766: 1, L0657: 1, L0526: 1, L0809: 1, L0439: 1 and L0740: 1.	
HTTFZ70	974066	1562	114 - 329	4249	Lys-20 to Lys-27.	H0040: 2 and H0634: 1.	
HTTHH05	931004	1563	436 - 606	4250	Tyr-12 to Gly-17.	H0634: 2	
HTTHU43	953479	1564	207 - 542	4251		L0755: 3, L0766: 2, H0031: 1, H0634: 1, L0439: 1 and L0759: 1.	
HTTIG04	926752	1565	2 - 235	4252	His-54 to Ser-61.	H0634: 2	
HTTHH23	869636	1566	2 - 247	4253	Lys-47 to Asp-56.	H0634: 2	
HTTHH80	869635	1567	32 - 226	4254		H0040: 1 and H0634: 1.	
HTTIL06	934089	1568	547 - 717	4255		H0040: 1, H0634: 1 and L0485: 1.	
HTTIN23	869634	1569	338 - 553	4256	Gln-15 to Thr-20.	H0634: 2	
HTTIU05	931015	1570	158 - 430	4257	Ala-17 to Gln-28,	H0634: 2	



HTTIW81	922817	1571	294 - 446	4258	Pro-73 to Thr-83.	H0634: 3		
HTTIZ05	930994	1572	112 - 354	4259	Ser-60 to Pro-69.	H0634: 2		
HTTJA11	839725	1573	13 - 240	4260	Glu-54 to Lys-60, Pro-65 to Gly-74.	H0040: 1, H0634: 1 and L0803: 1.		
HTTJA47	869618	1574	18 - 356	4261	Glu-61 to Lys-66, Met-76 to Asn-83.	H0040: 1 and H0634: 1.		
HTTJH13	869615	1575	3 - 182	4262	Gln-11 to Gly-17, Glu-26 to Ser-36, Arg-53 to Ala-60.	H0634: 2		
HTTJM01	913799	1576	137 - 283	4263	Pro-14 to Pro-20.	H0634: 2		
HTTJQ06	934130	1577	61 - 177	4264		H0040: 1 and H0634: 1.		
HTTJX68	974063	1578	1 - 147	4265	Arg-29 to Arg-41.	H0040: 1 and H0634: 1.		
HTTJY08	958170	1579	169 - 276	4266		H0634: 2		
HTTKD44	948750	1580	2 - 448	4267	Lys-13 to Arg-21, Gly-26 to Thr-36.	H0549: 1 and H0634: 1.		
HTTKF89	960928	1581	1 - 189	4268		H0040: 2 and H0634: 1.		
HTTKG34	915033	1582	56 - 181	4269		H0634: 2		
HTTKK06	974311	1583	210 - 383	4270		H0634: 3		
HTTKL80	974316	1584	228 - 362	4271		H0634: 3		
HTTKN21	974310	1585	354 - 509	4272		H0634: 3		
HTTKN30	920893	1586	166 - 429	4273	Asn-54 to Leu-60.	H0634: 1, H0672: 1 and L0740: 1.		
HTTKP07	911390	1587	2 - 337	4274	Thr-15 to Asp-25, Glu-69 to Leu-89.	AR089: 1, AR061: 1 H0634: 2		
HTTKS13	926795	1588	65 - 484	4275	Ala-12 to Gly-22,	H0634: 2		

							Pro-38 to Ser-45, Ala-77 to Pro-83, Ala-88 to Gly-93.				
HTTKV17	830008	1589	2 - 193	4276			Thr-1 to Gln-7, Gly-13 to Gln-37.		H0634: 2		
HUDAM29	529157	1590	3 - 224	4277					S0042: 2		
HUDBZ78	739638	1591	2 - 163	4278					H0038: 1 and S0042: 1.		
HUKAA62	503626	1592	308 - 81	4279			Ala-4 to Val-11, Gly-58 to Leu-64.		H0059: 2		
HUKAB80	503445	1593	210 - 347	4280					H0059: 2		
HUKAC72	966804	1594	1 - 309	4281			Glu-1 to Arg-14.		H0059: 2		
HUKAM82	954420	1595	122 - 322	4282					H0059: 3		
HUKAX07	954359	1596	36 - 164	4283			Gly-23 to Pro-31.		H0059: 2		
HUKCC86	529727	1597	57 - 224	4284			Pro-1 to Lys-7.		H0059: 2		
HUKDH28	531165	1598	26 - 334	4285			Ser-27 to Thr-35.		H0059: 2		
HUKDH50	531163	1599	3 - 164	4286			Asp-13 to Gln-19.		H0059: 2		
HUKBH36	531110	1600	139 - 327	4287					H0059: 2		
HUKEH50	531108	1601	126 - 254	4288			Pro-19 to Pro-28.		H0059: 2, L0657: 1, L0809: 1 and L0789: 1.		
HUKEK55	522213	1602	2 - 271	4289			Ile-49 to Gly-63, Ile-66 to Asp-77, Gly-84 to Ser-90.		H0059: 2 and L0766: 1.		
HUKBO55	714187	1603	253 - 62	4290					H0059: 2		
HUKES11	967604	1604	3 - 122	4291			Arg-1 to Ser-6, Tyr-11 to Asp-17.		H0059: 2		
HUKFL69	526819	1605	103 - 294	4292					H0059: 2		
HUKFV41	537530	1606	3 - 302	4293			Thr-14 to Trp-20, Gly-25 to Pro-30, Gln-42 to Trp-60.		H0059: 2 and L0803: 2.		

HUKFX63	946931	1607	2 - 112	4294	Cys-18 to Ser-24, Gly-29 to Gln-37.	AR061: 69, AR089: 1 H0046: 1 and H0059: 1.		
HUNAD94	575299	1608	1 - 135	4295	Thr-1 to Asn-10, Ser-18 to Lys-31.	T0069: 2		
HUVBB90	503042	1609	184 - 342	4296		H0056: 2		
HUVBB93	502903	1610	145 - 231	4297		H0056: 2		
HUVBC12	933023	1611	122 - 289	4298	Thr-35 to Asn-45.	H0056: 3		
HUVCQ07	928053	1612	3 - 371	4299	Asp-14 to Ala-30, Val-33 to Tyr-39, Ile-52 to Lys-58, Thr-83 to Arg-88.	H0056: 7		
HUVCQ55	868795	1613	163 - 372	4300	Ile-1 to Asn-8.	H0056: 10 and S0134: 1.		
HUVCS14	914768	1614	1 - 243	4301	Asn-1 to Ala-14, Arg-30 to Gly-37.	H0056: 1, H0623: 1 and L0748: 1.		
HUVCU71	968663	1615	79 - 279	4302	Leu-40 to Leu-45, Phe-55 to Leu-60.	H0056: 2		
HUVCW62	535361	1616	139 - 309	4303	Arg-6 to Ala-26.	H0056: 8		
HUVDB28	535006	1617	38 - 220	4304		H0056: 6 and L0547: 1.		
HUVDB53	509119	1618	151 - 297	4305	Gly-1 to Ser-10.	H0056: 2		
HUVDC15	921088	1619	3 - 176	4306		H0056: 11, L0805: 2, L0789: 2, S0358: 1, L0375: 1, L0776: 1, L0743: 1, L0777: 1 and L0759: 1.		
HUVDD09	707061	1620	1 - 177	4307	Pro-27 to Trp-38, Leu-48 to Arg-56.	H0056: 2		

HUVDF13	961020	1621	1 - 225	4308	Arg-1 to Ser-6, Arg-13 to Ser-18.	H0056: 2		
HUVDF84	526248	1622	2 - 214	4309		H0056: 2		
HUVDF88	522823	1623	3 - 257	4310	Gly-1 to Arg-12.	H0056: 3		
HUVDI28	530558	1624	29 - 241	4311	Glu-13 to Phe-18, Gly-46 to Ala-56.	H0056: 2, H0623: 1 and L0439: 1.		
HUVDI76	719332	1625	111 - 293	4312		H0056: 3 and H0623: 3.		
HUVDL30	530387	1626	3 - 110	4313	Lys-16 to Lys-36.	H0056: 2		
HUVDO25	679477	1627	233 - 412	4314	Ser-21 to Thr-29.	H0623: 2, H0056: 1 and L0748: 1.		
HUVDP95	530386	1628	1 - 81	4315	Phe-7 to Trp-22.	H0056: 2 and H0623: 2.		
HUVDS26	958027	1629	224 - 415	4316	Ala-2 to Gly-9.	H0623: 2, H0056: 1 and L0758: 1.		
HUVDU51	868660	1630	3 - 263	4317		H0056: 1 and H0623: 1.		
HUVED35	430750	1631	318 - 572	4318	Lys-31 to Gln-40, Gln-42 to Met-49, Lys-74 to Thr-82.	H0040: 1, H0056: 1, H0623: 1, L0755: 1 and L0592: 1.		
HUVED54	534783	1632	1 - 150	4319		H0056: 2		
HUVED65	527937	1633	75 - 164	4320	Gln-20 to Cys-26.	H0056: 2		
HUVEN50	530094	1634	3 - 110	4321	Arg-12 to Gly-17.	H0056: 2, H0615: 1 and H0623: 1.		
HUVFA55	868779	1635	148 - 354	4322		H0056: 2 and H0623: 1.		
HUVFB48	967815	1636	170 - 343	4323	Leu-22 to Ser-31.	H0056: 1 and H0623: 1.		
HUVFB69	868782	1637	175 - 330	4324		H0056: 1 and H0623:		

HUVFC07	952080	1638	85 - 240	4325	Phe-1 to Gly-8.	1. H0623: 2 and L0759: 1.		
HUVFH03	922064	1639	240 - 362	4326	Phe-3 to Arg-8, Arg-21 to Ser-27.	H0623: 2		
HUVFH32	934003	1640	160 - 294	4327	Ser-27 to Gly-32.	H0623: 3		
HUVFI03	868776	1641	3 - 131	4328		H0056: 1 and H0623: 1.		
HUVFK11	965765	1642	119 - 328	4329	Ser-46 to Pro-57.	H0623: 2		
HUVFK58	868784	1643	435 - 734	4330	His-7 to Thr-18, Gly-53 to Phe-59, Pro-67 to Ser-74, Val-76 to Leu-85.	H0623: 2, L0749: 2, H0056: 1 and L0794: 1.		
HUVFL71	958059	1644	3 - 128	4331	Asp-1 to Arg-7.	H0623: 2		
HUVFQ03	922727	1645	213 - 374	4332		H0623: 3		
HUVFR02	918233	1646	20 - 286	4333	Thr-3 to Ala-12, Ser-27 to Ala-32, Ala-38 to Glu-44.	H0623: 2 and L0534: 1.		
HUVFT28	870617	1647	97 - 417	4334	Arg-1 to Ser-8, Pro-13 to Pro-18, Glu-55 to Trp-64.	H0623: 3, H0616: 1 and L0748: 1.		
HUVFT50	868769	1648	3 - 371	4335	Asp-1 to Asn-10, Thr-29 to Trp-43, Trp-62 to Ser-68.	H0545: 1 and H0623: 1.		
HUVFZ06	933942	1649	225 - 422	4336	Thr-9 to Asp-17, Asp-43 to Arg-48.	H0623: 2		
HUVGZ77	909169	1650	2 - 382	4337	Lys-1 to Cys-8, Glu-31 to Ser-37, Val-98 to Pro-105.	AR089: 2, AR061: 1, H0623: 2, H0056: 1, L0803: 1, L0750: 1 and		

HUVHB35	868751	1651	145 - 354	4338			L0779: 1. H0056: 1 and H0623: 1.			
HUVHB59	963129	1652	200 - 400	4339	Pro-35 to Ser-46.		H0623: 3			
HUVHC93	908555	1653	51 - 344	4340	Pro-5 to Trp-10, Phe-20 to Met-26, Leu-85 to Trp-92.		AR089: 3, AR061: 1 H0040: 1, H0056: 1 and H0623: 1.			
HUVHD88	868697	1654	158 - 39	4341			H0623: 2			
HUVHG80	968507	1655	33 - 221	4342	Lys-21 to Lys-27.		H0623: 2 and H0056: 1.			
HUVHI07	952090	1656	313 - 522	4343	Leu-23 to Ser-35.		H0056: 1, H0623: 1 and L0367: 1.			
HUVHO40	924621	1657	1 - 486	4344	Leu-51 to Val-56, Ala-69 to Arg-74, Thr-82 to Thr-91, Asp-116 to Ile-126, Ala-142 to Pro-147.		H0623: 2 and L0731: 1.	22q13.33		
HUVHU74	868649	1658	158 - 361	4345	Thr-47 to Arg-53.		H0623: 2			
HVCAZ38	969208	1659	3 - 206	4346	Ala-47 to Phe-55.		H0666: 339, H0660: 3, L0751: 2, H0676: 1, H0560: 1 and H0520: 1.			
HVCBV04	925844	1660	519 - 632	4347	His-1 to Ser-6.		H0666: 5			
HVCCC81	933449	1661	3 - 62	4348			H0666: 2			
HVCCCK04	925796	1662	3 - 560	4349	Arg-8 to Gly-19, Pro-22 to Cys-29, Asp-54 to Cys-65, Ser-68 to Ala-77, Glu-97 to Ser-103, Pro-171 to Leu-176.		H0666: 222, L0776: 5, L0749: 3, S0358: 2, L0763: 2, L0766: 2, L0439: 2, L0596: 2, H0650: 1, H0341: 1, S0442: 1, H0009: 1,			

							H0178: 1, H0012: 1, H0087: 1, S0150: 1, L0805: 1, L0655: 1, L0657: 1, L0659: 1, L0783: 1, L0809: 1, L0789: 1, L0663: 1, S0374: 1, L0602: 1, L0731: 1 and L0758: 1.			
HVVAC41	949141	1663	85 - 273	4350			H0672: 2			
HVVVJ01	914354	1664	83 - 277	4351	Asp-34 to Glu-40.		H0644: 1, H0658: 1 and H0672: 1.			
HVVVJ06	933675	1665	1 - 240	4352			H0672: 2			
HVVVG19	968967	1666	1 - 171	4353			H0672: 2			
HVVVK45	964102	1667	710 - 480	4354	Cys-14 to Tyr-21.		L0666: 3 and H0672: 2.			
HVVVK72	933167	1668	2 - 397	4355	Glu-38 to Lys-43, Gly-125 to Thr-132.		AR061: 1, AR089: 1 H0038: 1, H0672: 1 and L0758: 1.			
HVVVB44	917559	1669	3 - 104	4356			H0672: 2			
HVVCO01	913996	1670	67 - 294	4357	Lys-12 to Trp-18, Phe-35 to Thr-42.		H0672: 2			
HWLHJ68	957834	1671	78 - 410	4358	Cys-17 to Lys-31.		AR089: 3, AR061: 2 H0651: 709, L0766: 5, L0754: 5, L0756: 3, L0803: 2, L0779: 2, L0759: 2, S0354: 1, H0643: 1, H0013: 1, H0194: 1, H0545: 1, H0373: 1, H0252: 1, H0615: 1, H0316: 1,			

							H0040: 1, H0641: 1, H0647: 1, S0422: 1, L0598: 1, L0369: 1, L0520: 1, L0762: 1, L0649: 1, L0804: 1, L0527: 1, L0656: 1, H0144: 1, H0702: 1, H0547: 1, H0555: 1, H0436: 1, S0028: 1, L0746: 1, L0750: 1, L0777: 1, L0780: 1, L0752: 1 and L0686: 1.			
HVVDT04	925793	1672	137 - 3	4359			L0766: 1 and H0672: 1.			
HVVB08	957658	1673	2 - 406	4360			AR089: 14, AR061: 6 H0672: 1			
HVVB06	933528	1674	288 - 443	4361		Pro-33 to Gly-38, Leu-45 to Thr-51.	L0731: 2, L0635: 1, L0663: 1, H0672: 1 and L0777: 1.			
HUVHL82	912011	1675	215 - 580	4362		Glu-28 to Arg-36, Pro-41 to Thr-50.	L0470: 1 and H0623: 1.			
HUVHI06	952479	1676	1856 - 2053	4363			L0471: 1 and H0623: 1.			
HUVGP05	930892	1677	2 - 397	4364		Ala-18 to Arg-25.	L0766: 3, H0623: 1, L0740: 1, L0745: 1 and L0779: 1.			
HUVFP71	950681	1678	443 - 204	4365			H0623: 1 and L0439: 1.			
HUVFI01	945834	1679	61 - 1212	4366			AR089: 2, AR061: 2 H0623: 1	6p21.1-p12	179605, 179605,	



									179605, 179605, 179605, 180297, 230450, 248611, 263200, 600364, 601498, 601690
HUVFE03	922889	1680	112 - 258	4367				H0623: 1 and L0777: 1.	
HUVDO18	868783	1681	13 - 177	4368	Gln-26 to Gln-33, Arg-38 to Thr-45.			H0056: 1	
HUVDO11	967813	1682	2 - 277	4369	Ile-1 to Leu-10, Gly-54 to Cys-77.			H0056: 1	
HUVDO07	954224	1683	200 - 313	4370				H0056: 1	
HUVDM27	521938	1684	1 - 144	4371	Gly-12 to Ser-17.			H0056: 1	
HUVDH61	526590	1685	80 - 343	4372	Ser-10 to Arg-15.			H0056: 1	
HUVCU26	974232	1686	420 - 701	4373	Leu-12 to Trp-20, Ile-29 to Val-34, Ser-52 to Arg-60.			H0056: 1	
HUVC76	522660	1687	1 - 147	4374	Arg-17 to Ser-38.			H0056: 1	
HUVBC21	671479	1688	2 - 199	4375	Lys-1 to Arg-7, Phe-48 to Phe-54.			L0745: 3, L0752: 3, H0056: 1, L0761: 1, L0803: 1, L0749: 1 and L0759: 1.	
HUVAA46	667943	1689	521 - 384	4376				H0055: 1	
HUNAK12	839574	1690	120 - 278	4377				T0069: 1 and L0779: 1.	

HUNAG41	711543	1691	185 - 352	4378	Ser-33 to Ser-38.	L0439: 4 and T0069: 1.	
HUNAF22	800452	1692	3 - 221	4379	Ser-12 to Ile-19, Thr-38 to Pro-46.	AR050: 45, AR051: 39, AR054: 35 T0069: 1	
HUNAF20	961527	1693	171 - 326	4380	Glu-26 to His-35, Pro-44 to Asn-49.	T0069: 1, L0764: 1, L0771: 1, L0783: 1 and L0756: 1.	
HUNAE95	796691	1694	2 - 205	4381		L0754: 4, T0069: 1 and L0599: 1.	
HUNAE76	524239	1695	50 - 214	4382	Ala-8 to Ser-14, Lys-21 to Pro-29.	T0069: 1	
HUNAE02	921132	1696	2 - 388	4383	Thr-26 to Pro-36, Ile-52 to Ser-60.	T0069: 1 and L0764: 1.	
HUNAD10	968590	1697	294 - 491	4384		T0069: 1 and L0766: 1.	
HUNAC68	753817	1698	65 - 199	4385	Asn-1 to Asn-6.	T0069: 1 and L0754: 1.	
HUNAB76	968754	1699	2 - 190	4386		L0748: 2 and T0069: 1.	
HUNAB42	714264	1700	3 - 170	4387	Lys-1 to Asn-9.	T0069: 1 and L0747: 1.	
HUKFS69	754186	1701	53 - 151	4388		H0059: 1 and L0756: 1.	
HUKFL89	574525	1702	1 - 174	4389	Leu-32 to Tyr-38.	H0059: 1 and L0752: 1.	
HUKFL71	760581	1703	2 - 241	4390	Gly-19 to Ser-24.	H0059: 1	
HUKFL52	574523	1704	67 - 213	4391		H0059: 1	
HUKFK53	577349	1705	263 - 433	4392		AR054: 9, AR050: 2, AR051: 1 H0059: 1	
HUKFE56	574381	1706	83 - 226	4393		H0059: 1 and L0747: 1.	
HUKFD95	796014	1707	47 - 364	4394	Arg-26 to Arg-31.	L0766: 2 and H0059:	

HUKEY01	921504	1708	29 - 178	4395	Pro-7 to Gly-18.	1. H0059: 1 and L0779: 1.		
HUKER62	772501	1709	532 - 119	4396		H0059: 1 and L0439: 1.		
HUKEP18	957456	1710	852 - 265	4397		AR061: 14, AR054: 11, AR050: 9, AR089: 4 L0758: 2, H0059: 1, L0789: 1, L0665: 1, L0749: 1 and L0779: 1.		
HUKDY02	920815	1711	234 - 482	4398		H0059: 1, L0439: 1 and L0747: 1.		
HUKDU47	719465	1712	33 - 185	4399	Met-23 to Gly-34, Glu-40 to Ser-50.	L0455: 1, H0059: 1 and L0753: 1.		
HUKDG10	968333	1713	3 - 329	4400		L0465: 2 and H0059: 1.		
HUKCP30	690933	1714	1 - 105	4401	Lys-27 to His-35.	H0059: 1, L0657: 1 and L0748: 1.		
HUKCO11	967742	1715	76 - 450	4402	Arg-1 to Asp-7, Glu-26 to Ser-31, Glu-51 to Val-56, Asp-59 to Val-69, Glu-85 to Asn-94.	L0766: 2, H0059: 1, L0764: 1 and L0774: 1.		
HUKCL85	529718	1716	77 - 229	4403	Phe-8 to Glu-15, Val-20 to Thr-25, Cys-40 to Glu-49.	H0059: 1		
HUKCC25	529723	1717	84 - 260	4404		H0059: 1		
HUKCC15	518537	1718	2 - 106	4405	Pro-18 to Cys-25.	H0059: 1		

HUKAT59	628540	1719	399 - 136	4406	Arg-16 to Cys-22, Pro-83 to Thr-88.	H0059: 1		
HUKAQ76	502711	1720	351 - 178	4407		H0059: 1 and L0748: 1.		
HUKAO47	502911	1721	379 - 170	4408		L0748: 2 and H0059: 1.		
HUKAM19	672076	1722	150 - 329	4409	Ala-47 to Thr-53.	H0059: 1		
HUKAM18	502912	1723	314 - 117	4410	Asp-34 to Arg-41, Glu-44 to Lys-50.	H0059: 1, L0800: 1, L0794: 1, L0789: 1, L0747: 1, L0750: 1 and L0362: 1.		
HUKAL44	716927	1724	139 - 402	4411	Arg-1 to Gln-7, Gln-11 to Ser-17, Ser-41 to His-46.	H0059: 1, L0775: 1, L0664: 1 and L0592: 1.		
HUKAJ91	790487	1725	159 - 1	4412		L0750: 2 and H0059: 1.		
HUKAJ83	524257	1726	317 - 102	4413	Lys-1 to Gln-8.	H0059: 1		
HUKAD77	772734	1727	2 - 421	4414	Ser-30 to Val-38, Gln-44 to Ser-53, Pro-56 to Gly-63.	H0059: 1 and L0755: 1.		
HUKAB63	625273	1728	1 - 207	4415	Trp-10 to Gly-16.	H0059: 1		
HUKAB25	677470	1729	274 - 2	4416		H0059: 1, L0520: 1, L0753: 1 and L0731: 1.		
HUKAA54	503630	1730	369 - 67	4417		H0059: 1		
HUKAA39	503627	1731	286 - 2	4418		L0439: 2 and H0059: 1.		
	503628	2659	156 - 434	5346				
HUDBZ01	869026	1732	213 - 533	4419	Arg-7 to Arg-13, Asn-31 to Ser-37.	AR050: 75, AR054: 59, AR051: 51		

	915945	2660	191 - 3	5347			S0042: 1		
HUDBK39	886368	1733	77 - 487	4420	Gly-43 to Leu-48, Ser-57 to Lys-67.		AR054: 2, AR051: 0, AR050: 0 S0042: 1		
HUDBE95	795796	1734	147 - 248	4421			S0042: 1		
HUDBE64	746508	1735	56 - 286	4422			S0042: 1		
HUDBE48	869034	1736	39 - 368	4423	Glu-17 to Ala-30, Gly-42 to Thr-56.		S0042: 1		
HUDBE28	686520	1737	3 - 374	4424	Glu-1 to Leu-6, Cys-10 to Asn-28, Lys-41 to Tyr-50, Gln-53 to Ser-60, Pro-67 to His-78.		S0042: 1		
HUDBE02	917361	1738	3 - 137	4425	Phe-2 to Arg-7, Asn-23 to Asn-32, Gln-39 to Asn-45.		S0042: 1		
HUDAK54	899753	1739	18 - 710	4426	Thr-14 to Phe-26, Gln-46 to Arg-52, Leu-74 to Tyr-84, Glu-125 to Glu-132, Tyr-180 to Ser-186, Leu-216 to Pro-222, Val-226 to His-231.		AR051: 32, AR050: 31, AR054: 25 S0042: 1		
HUDAK19	671974	1740	109 - 234	4427	Glu-27 to Glu-33.		L0783: 1, L0439: 1, L0731: 1 and S0042: 1.		
HTTKG12	969547	1741	1 - 171	4428	Thr-1 to Ser-10.		H0634: 1 and L0593: 1.		
HTTKC85	956206	1742	380 - 240	4429			H0634: 1, L0662: 1 and L0766: 1.		

HTTJV79	869602	1743	61 - 213	4430			H0634: 1 and L0766: 1.		
HTTJN26	869612	1744	132 - 497	4431	Gln-53 to Gln-62, Gly-80 to Val-86.		L0770: 3, L0777: 3, L0518: 2, L0779: 2, L0758: 2, L0608: 2, H0634: 1, L0764: 1, L0803: 1, L0749: 1 and L0752: 1.		
HTTJK06	934094	1745	2 - 577	4432	Gln-1 to Trp-16, Asp-18 to Gly-25, Leu-38 to Pro-43, Trp-146 to Gly-153.		H0634: 1 and L0565: 1.		
HTTIX05	931024	1746	395 - 532	4433			H0634: 1, L0803: 1, L0749: 1 and L0779: 1.		
HTTIR33	974323	1747	136 - 345	4434	Lys-11 to Glu-18.		H0634: 1		
HTTIR04	926772	1748	86 - 235	4435			H0634: 1, L0766: 1 and L0588: 1.		
HTTIN11	965920	1749	452 - 625	4436			L0745: 2 and H0634: 1.		
HTTIE08	958169	1750	195 - 329	4437	Ala-10 to Thr-16.		H0634: 1 and L0731: 1.		
HTTIB12	969568	1751	1 - 216	4438	Pro-25 to Thr-31, Pro-59 to Gly-72.		H0634: 1 and L0748: 1.		
HTTHJ56	944914	1752	87 - 218	4439	Asn-1 to Arg-11, Val-23 to Ser-28, Asp-35 to Tyr-44.		L0157: 1 and H0634: 1.		
HTTIFG12	751809	1753	128 - 373	4440	Leu-21 to Gly-30.		H0040: 1		
HTTEZ61	742004	1754	146 - 301	4441	Ser-24 to His-34.		H0040: 1 and L0439: 1.		

HTTEQ59	739445	1755	57 - 230	4442			H0040: 1, L0766: 1 and L0748: 1.		
HTTEQ01	917156	1756	2 - 205	4443	Pro-28 to Thr-38, Gly-47 to Arg-52.		H0040: 1, L0803: 1, L0439: 1 and L0777: 1.		
HTTEO59	900662	1757	1 - 153	4444	Gly-1 to Asp-8, Leu-15 to Cys-20, Gly-24 to Ser-29.		AR061: 5, AR089: 5 H0040: 1		
HTTEO53	728344	1758	396 - 545	4445	Arg-2 to Ile-8, Ser-34 to Cys-44.		H0040: 1, L0740: 1 and L0747: 1.		
HTTEI56	573669	1759	1 - 339	4446	Pro-1 to Glu-7, Thr-29 to Gly-35, Glu-63 to Ile-68, Glu-89 to Asn-95, Glu-98 to Leu-105.		AR050: 2, AR051: 1, AR054: 0 L0439: 3 and H0040: 1.		
HTTEB05	932294	1760	1 - 387	4447	Arg-10 to Asp-15.		L0483: 1 and H0040: 1.		
HTTDO59	744438	1761	511 - 747	4448	Arg-1 to Trp-9, Pro-13 to Gly-19, Gly-24 to Pro-32.		L0754: 2 and H0040: 1.	1q21	104770, 107670, 110700, 135940, 145001, 146790, 152445, 152445, 159001, 174000, 179755, 182860, 182860, 182860,

								191315, 230800, 230800, 266200, 600897, 601105, 601412, 601652, 602491
HTTDM42	460948	1762	177 - 401	4449				AR061: 5, AR089: 5 L0748: 2 and H0040: 1.
HTTDL81	694222	1763	2 - 241	4450	Ala-4 to Pro-22.			H0040: 1 and L0748: 1.
HTTDL75	766551	1764	41 - 178	4451	Gly-10 to Cys-16, Arg-25 to Trp-31, Pro-39 to Pro-46.			H0040: 1, L0742: 1 and L0592: 1.
HTTDA85	784537	1765	3 - 392	4452	Arg-83 to Arg-88.			H0040: 1 and L0748: 1.
HTTCQ95	796674	1766	2 - 241	4453	Cys-19 to Pro-29.			H0040: 1 and L0755: 1.
HTTCJ39	709581	1767	63 - 266	4454	Ala-50 to Asp-55.			L0745: 2 and H0040: 1.
HTTCD06	960599	1768	162 - 413	4455	Lys-15 to Asn-23, Asp-75 to Val-82.			L0754: 2 and H0040: 1.
HTTCB87	524841	1769	3 - 236	4456	Pro-7 to Ala-26.			H0040: 1 and L0748: 1.
HTTBR42	714220	1770	3 - 272	4457				H0040: 1 and L0592: 1.
HTTBP62	932997	1771	1 - 615	4458	Arg-12 to Gly-20,			L0764: 2 and H0040: 1.



						His-102 to Ser-108, Ala-132 to Gln-137.	1.			
HTTB082	780164	1772	367 - 170	4459		Asn-24 to Asp-32.	H0040: 1 and L0748: 1.			
HTTBM03	925409	1773	11 - 202	4460		Arg-18 to Trp-29.	H0040: 1 and L0753: 1.			
HTTBI80	781590	1774	3 - 203	4461		Asp-1 to Gln-14, Phe-18 to Gly-33.	H0040: 1 and L0766: 1.			
HTTBH95	530559	1775	125 - 256	4462		Tyr-1 to Tyr-12.	H0040: 1			
HTTBH75	767520	1776	175 - 435	4463			H0040: 1 and L0439: 1.			
HTTBH36	530567	1777	186 - 311	4464			H0040: 1			
HTTAQ60	742377	1778	367 - 627	4465		Asn-1 to Cys-12, Asp-20 to Trp-37.	L0748: 3 and H0040: 1.			
HTTAP45	717736	1779	65 - 262	4466			H0040: 1			
	869717	2661	151 - 342	5348						
HTTAP21	671488	1780	632 - 787	4467			L0747: 2 and H0040: 1.			
HTTAP09	826343	1781	252 - 440	4468			H0040: 1 and L0591: 1.			
HTTAN34	509454	1782	111 - 230	4469		Ser-4 to Lys-12.	L0595: 2, H0040: 1 and L0794: 1.			
HTTAJ93	791413	1783	220 - 420	4470			L0748: 2 and H0040: 1.			
HTTAH03	965134	1784	73 - 294	4471		Ile-15 to Phe-21, Pro-31 to Cys-39, Pro-41 to Pro-49, Leu-69 to Pro-74.	L0769: 2 and H0040: 1.			
HTTAC77	772735	1785	435 - 632	4472			L0752: 2, H0040: 1			

HTTAA94	793001	1786	2 - 271	4473	Asn-14 to Leu-20, Gln-30 to Pro-46.	and L0756: 1. L0749: 2, H0040: 1, L0748: 1 and L0591: 1.		
HTTAA39	710355	1787	298 - 137	4474		H0040: 1 and L0731: 1.		
HTLIP06	934207	1788	20 - 241	4475		H0618: 1, L0751: 1 and L0758: 1.		
HTLID06	974047	1789	318 - 491	4476	Gln-10 to Ser-16.	H0618: 1		
HTLHV59	965808	1790	41 - 277	4477	Pro-8 to Ala-15, Arg-23 to Glu-35, Pro-41 to Val-49.	H0618: 1 and L0731: 1.		
HTLHU81	870150	1791	1 - 345	4478		L0591: 2 and H0618: 1.		
HTLHU63	870147	1792	219 - 527	4479	Glu-33 to Arg-40.	L0439: 3 and H0618: 1.		
HTLHS69	870152	1793	144 - 593	4480	Lys-34 to Pro-40, Glu-51 to Gly-56, Glu-117 to Gly-124.	H0618: 1 and L0770: 1.		
HTLHS05	933720	1794	724 - 113	4481	Pro-42 to Ser-47, Ala-51 to Arg-68, Leu-109 to Gly-117.	H0618: 1 and L0771: 1.		
HTLHK57	894863	1795	736 - 1140	4482	Phe-10 to Pro-19, Gly-107 to Arg-112, Thr-128 to Lys-135.	AR054: 35, AR051: 24, AR050: 10, AR061: 8, AR089: 3 H0618: 1, L0766: 1 and L0749: 1.		
	946914	2662	1342 - 1788	5349	Ser-49 to Lys-58, Glu-75 to Pro-91.			
HTLHJ51	865399	1796	165 - 878	4483	Gln-3 to Arg-10,	H0618: 1, L0749: 1		

						Leu-74 to Arg-80, Pro-87 to Cys-92, Ser-144 to Pro-158.			and L0759: 1.		
HTLHB93	945862	1797	1 - 375	4484		Glu-1 to Glu-6.			AR061: 1, AR089: 1 H0618: 1 and L0758: 1.		
HTLHA63	870172	1798	243 - 566	4485					H0618: 1 and L0779: 1.		
HTLGS10	963458	1799	1 - 483	4486		Ser-25 to Asn-32, His-40 to Glu-45.			L0769: 2 and H0618: 1.		
HTLGR32	928245	1800	657 - 950	4487		Arg-14 to Gly-29.			L0779: 3, L0758: 3, H0618: 1 and L0600: 1.		
HTLGP84	782194	1801	1 - 393	4488		Ser-1 to Lys-12, Met-22 to Gly-29, Pro-62 to Gly-69.			L0439: 3, L0753: 3, H0618: 1, L0741: 1, L0745: 1 and L0746: 1.		
HTLGK08	958304	1802	182 - 388	4489		Glu-35 to Ile-51.			H0618: 1 and L0758: 1.		
HTLGC43	870228	1803	3 - 350	4490		Glu-1 to His-15, Gly-21 to Cys-26, Thr-34 to Pro-42, Pro-49 to Glu-57.			L0794: 2, H0618: 1 and L0768: 1.		
HTLEQ92	932882	1804	3 - 305	4491					L0439: 3 and H0253: 1.		
HTLEP21	671151	1805	3 - 416	4492		Val-25 to Ala-31.			H0253: 1 and L0767: 1.		
HTLEN77	772363	1806	90 - 422	4493		Ala-1 to Ala-35.			AR089: 33, AR061: 18 L0748: 2 and H0253: 1.		
HTLEM92	573400	1807	1 - 429	4494		Gly-1 to Arg-13, Phe-19 to Arg-33.			H0253: 1		

	792812	2663	360 - 599	5350	Glu-28 to Val-34, Trp-58 to Ser-64.			
HTLEL16	384492	1808	2 - 355	4495	Thr-30 to Glu-35, Asp-101 to Gly-106, Ser-112 to Ser-117.	H0253: 1 and L0439: 1.		
HTLEG67	751842	1809	138 - 317	4496	Thr-6 to Ser-11.	L0748: 2 and H0253: 1.		
HTLDZ81	778180	1810	3 - 296	4497	Ser-5 to Arg-17.	H0253: 1		
HTLDW27	961353	1811	197 - 601	4498	His-1 to Cys-8, His-35 to Phe-40.	H0253: 1, L0761: 1, L0649: 1 and L0805: 1.		
HTLDO01	913669	1812	3 - 308	4499	Glu-63 to Ala-68, Gly-84 to Tyr-102.	L0758: 3 and H0253: 1.		
HTLDG43	715439	1813	1 - 132	4500	Ala-28 to Trp-33.	H0253: 1		
HTLDB18	868533	1814	2 - 448	4501	Ser-13 to Gly-19, Leu-22 to Asn-36, Asn-57 to Ser-68, Pro-82 to Trp-107.	H0253: 1 and L0439: 1.		
HTLCZ79	572853	1815	1 - 285	4502	Asp-72 to Leu-78.	H0253: 1		
HTLCX66	578921	1816	23 - 199	4503	Gly-6 to Thr-12, Pro-28 to Arg-34, Asn-39 to Asn-47.	H0253: 1		
HTLCO02	921045	1817	152 - 382	4504	Arg-50 to Trp-58.	H0253: 1 and L0768: 1.		
HTLCG65	413333	1818	3 - 143	4505	Ala-14 to Asn-22.	H0253: 1		
HTLCG59	530039	1819	6 - 218	4506		H0253: 1		
HTLCA03	870290	1820	50 - 250	4507		H0253: 1		
HTLBH67	751985	1821	1 - 282	4508		AR061: 2, AR089: 1 L0752: 3, L0747: 2, H0294: 1, H0253: 1,		

							H0046: 1, H0040: 1, H0063: 1, H0494: 1, S0352: 1, L0769: 1, L0766: 1, L0804: 1, L0805: 1, L0791: 1, H0521: 1, L0779: 1, L0780: 1, L0731: 1 and L0758: 1.			
HTLBC07	954111	1822	259 - 408	4509			L0758: 2 and H0253: 1.			
HTLBB72	766270	1823	3 - 590	4510		His-1 to Trp-11, Lys-13 to Ser-27, Glu-33 to Ser-38.	H0253: 1, L0745: 1 and L0750: 1.			
HTLAI30	690936	1824	133 - 492	4511			L0439: 3, L0438: 2, H0253: 1 and L0769: 1.			
HTLAF33	870300	1825	1 - 228	4512		Phe-2 to Arg-12.	H0253: 1			
HTLAC61	683247	1826	28 - 165	4513			H0253: 1	6p25-pter		
HTLAC39	575343	1827	74 - 226	4514		Ala-1 to Trp-18.	H0253: 1			
HTLAB55	732480	1828	3 - 320	4515		Gln-32 to Leu-37, Gln-65 to Val-70, Thr-73 to Pro-79.	H0253: 1 and L0439: 1.			
HTLAB29	879168	1829	133 - 426	4516		Gly-1 to Thr-9.	H0253: 1 and L0747: 1.			
HTFBE02	920507	1830	1 - 363	4517		Asp-28 to Leu-35, Asp-52 to Cys-57.	AR089: 1, AR061: 0 L0439: 2, L0021: 1, H0372: 1, L0769: 1, L0649: 1, L0748: 1, L0485: 1, L0604: 1 and L0361: 1.			
HTEQS95	972746	1831	311 - 496	4518		Ser-37 to Ser-43.	H0616: 1			

HTEQS90	973426	1832	86 - 388	4519	Pro-45 to Pro-50, Arg-64 to Ser-77, Ile-88 to Ala-101.	H0616: 1		
HTEQP03	870516	1833	129 - 596	4520	Pro-71 to Cys-82.	H0616: 1 and L0794: 1.		
HTEQN83	908528	1834	3 - 293	4521	Met-12 to Met-24, Pro-46 to Tyr-52, Arg-92 to Lys-97.	AR061: 4, AR089: 1 L0758: 2 and H0616: 1.		
HTEQB08	958291	1835	147 - 437	4522	Val-48 to Gly-54, Asp-63 to Arg-74, Gly-87 to Leu-92.	L0748: 2, H0616: 1 and L0747: 1.		
HTEPY28	870559	1836	263 - 412	4523	Ala-1 to Met-6, Gly-9 to Ser-15.	L0758: 3 and H0616: 1.		
HTEPV63	870549	1837	614 - 931	4524	Leu-47 to Thr-59, Pro-73 to Pro-87.	H0616: 1, L0519: 1, L0748: 1 and L0779: 1.		
HTEPE35	948475	1838	839 - 78	4525	Tyr-1 to Lys-8, Phe-19 to Ser-24, Thr-28 to Ser-34, Pro-54 to Trp-70.	AR061: 4, AR089: 1 L0758: 7, L0768: 2, H0616: 1 and L0151: 1.		
HTEOY82	948845	1839	159 - 392	4526		H0616: 1 and L0779: 1.		
HTEOO83	836721	1840	1 - 318	4527	Lys-22 to Asp-27.	H0616: 1 and L0774: 1.		
HTEOE28	870581	1841	18 - 296	4528	Leu-80 to Lys-86.	H0616: 1 and L0779: 1.		
HTENY44	870588	1842	3 - 191	4529	Asp-16 to Arg-23, Leu-40 to Asp-47.	L0758: 3, H0616: 1, L0794: 1, L0791: 1 and L0779: 1.		
HTENV06	933294	1843	133 - 390	4530	Glu-1 to Ser-10.	H0616: 1 and L0755: 1.		

HTENS74	773925	1844	3 - 329	4531	Arg-30 to Arg-37, Asn-40 to Glu-46, Leu-56 to Arg-64, Ala-85 to Arg-102.	L0755: 2 and H0616: 1.	17p13.3	113721, 247200, 600059, 601545
HTENR26	870595	1845	15 - 146	4532	Thr-12 to Ile-17.	H0616: 1 and L0768: 1.		
HTENQ92	790908	1846	54 - 494	4533	Ala-6 to Trp-19, Leu-34 to Gln-39, Asp-63 to Arg-76, Thr-94 to Gly-105, Asp-108 to Phe-113, Lys-122 to Phe-128, Asn-131 to Glu-136, Arg-142 to Gly-147.	L0731: 3, H0616: 1 and L0750: 1.		
HTENP08	958382	1847	58 - 447	4534	Tyr-2 to His-7.	H0616: 1 and L0794: 1.		
HTENL95	795314	1848	149 - 322	4535	Pro-43 to Ile-51.	L0748: 2, H0616: 1, L0439: 1 and L0740: 1.		
HTENL73	974363	1849	109 - 426	4536	Pro-29 to Thr-34, Cys-42 to Ser-47, Gln-52 to His-58, Pro-68 to Cys-80.	H0616: 1		
HTENA08	958380	1850	60 - 206	4537		H0616: 1 and L0758: 1.		
HTEMY05	880592	1851	1 - 363	4538	Cys-18 to Lys-43, Ser-45 to Leu-52, Ser-63 to Ser-68, Lys-75 to Arg-80, His-113 to Lys-121.	H0616: 1 and L0362: 1.		
HTEMV66	813038	1852	1 - 318	4539	Ser-38 to Pro-45.	AR061: 5, AR089: 1		

									H0616: 1 and L0758: 1.			
HTEMU66	944419	1853	454 - 963	4540		Ala-1 to Gln-7, Lys-24 to Ser-30, Pro-44 to Asn-53, Glu-104 to Asp-112, Leu-152 to Ser-157.			AR061: 7, AR089: 5 H0616: 1			
HTEMS01	915308	1854	21 - 197	4541		Glu-3 to Cys-9, Gln-32 to Asp-45.			L0758: 4 and H0616: 1.			
HTEMO58	964769	1855	77 - 361	4542					H0616: 1 and L0758: 1.			
HTEMN80	775543	1856	51 - 137	4543					H0616: 1 and L0439: 1.			
HTEMM91	938396	1857	58 - 378	4544		His-15 to Arg-22.			H0616: 1 and L0747: 1.			
HTEMI51	870613	1858	283 - 573	4545		Arg-24 to Pro-30.			H0616: 1, L0779: 1 and L0758: 1.			
HTEMB57	849214	1859	198 - 374	4546		His-44 to Phe-49, Pro-53 to Pro-58.			H0616: 1 and L0758: 1.			
HTELY90	787549	1860	2 - 250	4547					H0616: 1 and L0748: 1.			
HTELV29	806421	1861	33 - 641	4548		Pro-28 to His-34, Lys-51 to Arg-59, Arg-66 to Phe-82, Thr-92 to Gln-100, Ala-106 to Gln-118, Pro-123 to Leu-133, Ala-137 to Glu-147, Arg-185 to Leu-190.			H0616: 1 and L0594: 1.			
HTELP07	952274	1862	102 - 296	4549		Thr-15 to Lys-28,			H0616: 1, L0764: 1,			



HTELM71	954982	1863	63 - 329	4550	Gly-47 to Thr-54.	L0779: 1 and L0758: 1.		
					Pro-24 to Asn-37, Asp-43 to Thr-49, Leu-63 to Gln-72.	L0758: 2 and H0616: 1.		
HTELA02	918699	1864	185 - 451	4551	Ala-48 to Lys-57, Ser-75 to Phe-84.	L0794: 2, H0616: 1 and L0758: 1.		
HTEKU62	754010	1865	43 - 657	4552	His-1 to Lys-7.	H0038: 1 and L0439: 1.		
HTEKI62	812862	1866	68 - 286	4553	Pro-43 to Asn-48.	L0766: 2, H0038: 1, L0637: 1, L0750: 1 and L0590: 1.		
HTEKH17	942526	1867	83 - 391	4554		AR051: 29, AR050: 21, AR054: 21, AR089: 11, AR061: 11 H0038: 1		
HTEKD77	772397	1868	105 - 428	4555	Ala-5 to Arg-15.	H0038: 1 and L0756: 1.		
HTEJV94	793039	1869	92 - 241	4556	Pro-19 to Phe-28.	L0758: 2 and H0038: 1.		
HTEJO46	717850	1870	282 - 401	4557	Ser-5 to Cys-16, Glu-20 to Ile-25.	H0038: 1 and L0743: 1.		
HTEJN12	653252	1871	1 - 279	4558		H0038: 1 and L0595: 1.	Xp22	300000, 300066, 300077, 300310, 301220, 302350, 304050, 304110, 306100,

HTEJL30	696784	1872	23 - 301	4559				L0748: 2 and H0038: 1.	15q21.1-q21.2	309530, 309585, 312040
										107910, 107910, 109700, 114240, 134797, 134797, 134797, 151670, 600839, 601780, 602099
HTEJC70	490772	1873	601 - 380	4560				H0038: 1 and L0748: 1.		
	870649	2664	1 - 330	5351			Arg-1 to Arg-6, Pro-17 to Ala-23, Gly-33 to Gln-40, Arg-45 to Arg-73.			
HTEJB07	953801	1874	79 - 264	4561			Thr-1 to Glu-7, Cys-35 to Gly-51.	L0779: 3, L0758: 2 and H0038: 1.		
HTEIS34	887112	1875	383 - 135	4562			Cys-33 to Asn-38.	H0038: 1 and L0366: 1.		
HTEIS25	870660	1876	3 - 299	4563			Pro-31 to Arg-37, Phe-39 to Ala-55.	L0758: 4 and H0038: 1.		
HTEIN26	684711	1877	178 - 417	4564			Gly-1 to Glu-9, Ile-12 to Lys-30, Cys-34 to Lys-39, Glu-55 to Gln-62.	H0038: 1 and L0754: 1.		

HTEIL36	708304	1878	69 - 395	4565	Val-66 to Lys-72.	H0038: 1, L0768: 1, L0438: 1 and L0779: 1.			
HTEIJ58	491030	1879	379 - 179	4566	Asp-19 to Ser-25.	H0038: 1			
	870667	2665	3 - 281	5352	Ile-1 to Phe-9, Gly-73 to Gly-82.				
HTEID15	395868	1880	44 - 151	4567	Gln-1 to Leu-6.	H0038: 1			
HTEIB38	839966	1881	39 - 296	4568	His-1 to Asp-9, Lys-37 to Glu-45.	H0038: 1 and L0779: 1.			
HTEIB37	870671	1882	19 - 264	4569	Gln-11 to Cys-18.	H0038: 1			
HTEIB03	921926	1883	35 - 235	4570	Pro-2 to Thr-13.	H0038: 1			
HTEIA57	734983	1884	1 - 225	4571	Glu-1 to Ser-18.	L0748: 2 and H0038: 1.			
HTEHX57	734976	1885	279 - 446	4572	Gly-14 to Val-21, Thr-25 to Leu-32.	H0038: 1, L0740: 1 and L0754: 1.			
HTEHV11	967439	1886	59 - 361	4573	Gln-9 to Ala-21, Thr-24 to Thr-29.	H0038: 1, L0779: 1 and L0758: 1.			
HTEHS17	664436	1887	15 - 233	4574	Lys-30 to Leu-39, Glu-42 to Ser-53.	L0758: 3, L0151: 2, H0038: 1 and L0779: 1.			
HTEHJ11	964956	1888	147 - 254	4575	Gly-10 to Arg-19.	L0163: 1 and H0038: 1.			
HTEGW02	920628	1889	64 - 747	4576	Lys-1 to Arg-27, Thr-42 to Met-57, Gln-89 to Ala-95, Asp-113 to Ser-119, Thr-128 to Thr-156, Phe-179 to Ser-187.	L0758: 3, L0776: 2, L0779: 2 and H0038: 1.			
HTEGU55	931017	1890	173 - 388	4577	Ala-1 to Lys-10, Pro-29 to Ser-36,	L0439: 2 and H0038: 1.	20q13.12	602025	

							Gly-46 to Ser-58, Ile-62 to Cys-67.				
HTEGS24	932987	1891	130 - 600	4578		1891	Glu-13 to Ser-20, Pro-33 to Phe-38, Ser-41 to Lys-49.			H0038: 1 and L0766: 1.	
HTEGJ74	765901	1892	3 - 452	4579		1892				AR089: 3, AR061: 2 L0439: 2 and H0038: 1.	
HTEGJ56	732630	1893	272 - 457	4580		1893	Asp-26 to Trp-35.			H0038: 1 and L0755: 1.	
HTEGI38	709420	1894	74 - 325	4581		1894				H0038: 1 and L0749: 1.	
HTEGH60	545137	1895	3 - 221	4582		1895	Gly-5 to Gly-12.			H0038: 1	
HTEGC30	690998	1896	2 - 97	4583		1896				H0038: 1 and L0756: 1.	
HTEFX90	887616	1897	3 - 581	4584		1897				AR050: 9, AR051: 3, AR054: 1 H0038: 1, L0750: 1 and L0755: 1.	
HTEFU18	666920	1898	3 - 353	4585		1898	Leu-25 to Asp-35, Ser-41 to Tyr-47, Trp-72 to Pro-77, Lys-106 to Arg-112.			H0038: 1, L0766: 1, L0789: 1 and L0749: 1.	
HTEFO46	719280	1899	133 - 408	4586		1899	Pro-28 to Tyr-38, Thr-40 to Lys-48, Val-61 to Thr-68, Glu-74 to Gln-82.			L0591: 2, H0038: 1, L0381: 1, L0779: 1 and L0758: 1.	
HTEFO28	685383	1900	150 - 464	4587		1900	Thr-6 to Gln-12.			H0038: 1, L0744: 1 and L0756: 1.	
HTEEU78	530196	1901	2 - 256	4588		1901	Ile-1 to Ala-7,			H0038: 1	

HTEEU35	707717	1902	2 - 115	4589	Arg-26 to Gly-38.	H0038: 1		
HTEEU27	575476	1903	99 - 227	4590	Glu-15 to Ser-20.	H0038: 1		
HTEEU18	530203	1904	2 - 280	4591	Ser-14 to Ser-25, Leu-42 to Glu-62, Ala-75 to Thr-84.	H0038: 1 and L0758: 1.	1p21	102770, 120280, 120280, 166600, 170995, 232400, 232400, 600309, 601414, 601691, 601691, 601691, 601691, 601718, 602094
HTEEU17	530200	1905	76 - 303	4592	Pro-40 to Leu-50, Ser-64 to Gln-74.	H0038: 1		
HTET22	675071	1906	206 - 373	4593	Thr-20 to His-29, Pro-31 to Ser-38.	H0038: 1, L0756: 1 and L0758: 1.		
HTEEF25	677513	1907	123 - 341	4594		H0038: 1, L0794: 1 and L0758: 1.		
HTEEB82	780161	1908	151 - 288	4595	Ser-11 to Arg-19.	L0748: 2 and H0038: 1.		
HTEDX39	530201	1909	123 - 260	4596		H0038: 1		
HTEDX04	927850	1910	114 - 344	4597		H0038: 1		
HTEDX03	925353	1911	1 - 204	4598		H0038: 1		
HTEDW96	881958	1912	86 - 511	4599	Thr-48 to Ser-53,	L0601: 2 and H0038: 2q37.2		

					Gly-63 to Arg-68, Gly-77 to Trp-85, Gln-99 to Gly-112, Arg-131 to Arg-142.	1.			
HTEDW59	530448	1913	1 - 213	4600	Gly-17 to Glu-29.	H0038: 1			
HTEDV86	785818	1914	86 - 322	4601	Ser-47 to Phe-57.	H0038: 1 and L0749:			
HTEDU53	727362	1915	2 - 253	4602	Gly-22 to Arg-28.	H0038: 1 and L0756:			
HTEDS40	934047	1916	147 - 509	4603		H0038: 1			
HTEDS06	960645	1917	625 - 170	4604		H0038: 1 and L0779:			
HTEDO75	767024	1918	60 - 197	4605		H0038: 1			
HTEDK72	766343	1919	137 - 283	4606		H0038: 1 and L0740:			
HTEDI92	522827	1920	3 - 143	4607		H0038: 1			
HTEDI63	508086	1921	29 - 322	4608		H0038: 1			
HTEDI09	522969	1922	233 - 409	4609		H0038: 1			
HTEDI01	961028	1923	92 - 229	4610		H0038: 1			
HTEDH90	909165	1924	3 - 311	4611	Phe-1 to Pro-7, Trp-32 to Thr-39.	AR061: 3, AR089: 1 H0038: 1			
HTEDH76	522940	1925	3 - 170	4612	Gly-2 to Ile-13.	H0038: 1			
HTEDH42	615250	1926	18 - 353	4613	Leu-56 to Leu-63, Gly-103 to Arg-108.	AR061: 6, AR089: 4 H0038: 1			
HTEDH30	522936	1927	1 - 249	4614	Asn-1 to Gly-17.	H0038: 1			
HTEDH17	522938	1928	80 - 385	4615	Pro-67 to Gly-75.	H0038: 1			
HTEDH06	869427	1929	2 - 361	4616	Ile-1 to Lys-9, Pro-88 to Lys-100.	H0038: 1			
HTEDG75	890715	1930	162 - 371	4617	Arg-43 to Thr-50.	AR050: 42, AR054:			

							35, AR051: 33 H0038: 1		
HTEDG26	519947	1931	1 - 396	4618	Asn-1 to Arg-8, Leu-18 to Asp-23, Glu-84 to His-89.		H0038: 1		
HTEDF96	614726	1932	1 - 174	4619	Leu-22 to Arg-34.		H0038: 1	19q13.3	113900, 126340, 126391, 130410, 134790, 138570, 160900, 173850, 258501, 600040, 602225, 602225
HTEDF70	522977	1933	2 - 277	4620	Ple-1 to Gln-11.		H0038: 1		
HTEDF60	742368	1934	1 - 369	4621	Glu-1 to Gln-7, Arg-16 to Asp-30, Pro-35 to Asn-43.		H0038: 1		
HTEDF22	908406	1935	1 - 303	4622	Pro-2 to Trp-7, His-28 to Gly-35, Pro-37 to Gly-56, Gly-68 to Lys-75.		AR061: 8, AR089: 3 L0758: 2 and H0038: 1.		
HTECE66	522997	1936	26 - 196	4623	Gly-36 to Gly-52.		H0038: 1		
HTECE62	523002	1937	1 - 369	4624	Ala-22 to Gly-30, Asn-36 to Ala-43.		H0038: 1		
HTECE61	789732	1938	85 - 471	4625	Ser-30 to Arg-36.		H0038: 1 and L0750: 1.		

HTECE51	870723	1939	85 - 282	4626	Leu-30 to Arg-40.	H0038: 1		
HTECE39	650885	1940	63 - 401	4627	Ser-37 to Gly-49.	H0038: 1		
HTECE31	508104	1941	33 - 203	4628		H0038: 1		
HTECE08	960428	1942	2 - 154	4629	Ile-1 to Ser-8, Pro-13 to Ser-19, Gly-31 to Ile-41.	H0038: 1		
HTECD94	527210	1943	1 - 330	4630	Val-28 to Cys-55, Arg-71 to Cys-90, Pro-102 to Pro-107.	H0038: 1	7q11-q22	126650, 126650, 154276, 173360, 173360, 602136, 602136, 602136, 602447
HTECD88	527214	1944	246 - 356	4631		H0038: 1		
HTECD70	527203	1945	2 - 211	4632	Ala-28 to Ser-43, Ala-57 to Tyr-64.	H0038: 1		
HTECD65	533795	1946	144 - 341	4633		H0038: 1		
HTECD56	527209	1947	3 - 119	4634	Ala-10 to Thr-18.	H0038: 1		
HTECD15	523029	1948	3 - 251	4635	Pro-23 to Val-32, Ala-54 to Ala-60, Thr-68 to Gly-73.	H0038: 1		
HTECC71	508142	1949	3 - 173	4636	Glu-39 to Cys-57.	H0038: 1		
HTECC45	508124	1950	20 - 142	4637	Phe-1 to Gly-10, Leu-32 to Cys-39.	H0038: 1		
HTECC26	508144	1951	74 - 202	4638	Ser-21 to Ser-29, Ala-31 to Thr-37.	H0038: 1		
HTECC09	678659	1952	3 - 365	4639	Arg-1 to Pro-6.	AR089: 39, AR061: 19		



HTECC08	960439	1953	2 - 151	4640			H0038: 1		
HTECA44	508135	1954	56 - 439	4641	Ile-4 to Lys-23, Arg-87 to Cys-103.		H0038: 1		
HTECA39	508132	1955	105 - 236	4642	Gly-9 to Leu-17, Arg-38 to Glu-44.		H0038: 1		
HTEBP54	728811	1956	559 - 744	4643			L0754: 2 and H0038: 1.		
HTEBO43	715704	1957	3 - 266	4644	Gly-42 to Gln-53, Leu-67 to Glu-76.		H0038: 1		
HTEBM87	503275	1958	78 - 230	4645	Glu-16 to Lys-21, Met-25 to Tyr-32.		H0038: 1		
HTEBL53	578544	1959	110 - 367	4646	Pro-7 to Cys-13, Glu-41 to Trp-46, Ser-60 to Gln-65.		H0038: 1		
HTEBI02	921321	1960	123 - 299	4647			H0038: 1 and L0748: 1.		
HTEBH09	870732	1961	23 - 346	4648	Glu-7 to Gly-14.		H0038: 1 and L0758: 1.		
HTEAX06	960792	1962	134 - 394	4649	Ala-7 to Val-13, Pro-15 to Val-21.		L0758: 3, L0666: 2, L0021: 1, H0038: 1 and L0665: 1.		
HTEAV22	679394	1963	151 - 462	4650			L0439: 2, L0717: 1, H0038: 1, L0769: 1, L0772: 1, L0800: 1, L0666: 1, L0758: 1 and L0601: 1.		
HTEAU39	503295	1964	371 - 144	4651	Ser-8 to Asn-19.		L0439: 4 and H0038: 1.		

HTEAT17	667184	1965	45 - 311	4652			L0758: 5, H0038: 1 and L0768: 1.		
HTEAS02	921323	1966	79 - 324	4653			H0038: 1 and L0758: 1.		
HTEAR93	503298	1967	373 - 230	4654	Ser-19 to Trp-27.		H0038: 1		
HTEAQ55	732562	1968	3 - 398	4655	Asn-14 to Gln-20, Arg-28 to Glu-40.		L0740: 3, L0731: 3, L0748: 2, L0757: 2 and H0038: 1.		
HTEAJ96	503533	1969	216 - 434	4656	Phe-10 to Ser-16, Ser-24 to Gly-50.		H0038: 1		
HTEAH75	503546	1970	145 - 336	4657			H0038: 1		
HTEAG47	503623	1971	146 - 268	4658	Ala-15 to Leu-24, Pro-32 to Cys-41.		L0748: 2 and H0038: 1.		
HTEAG08	960469	1972	17 - 172	4659			H0038: 1 and L0766: 1.		
HTEAB50	724751	1973	7 - 324	4660	Ser-17 to Cys-23, Pro-25 to Ala-32.		H0038: 1 and L0758: 1.		
HTEAA04	925522	1974	106 - 348	4661	Arg-20 to Tyr-28, Phe-31 to Arg-38, Asp-44 to Arg-51.		L0758: 2 and H0038: 1.		
HSWBY36	708291	1975	87 - 218	4662	Arg-17 to Gly-22.		H0546: 1, L0598: 1 and L0759: 1.		
HSWBT69	867537	1976	3 - 380	4663	Ala-26 to Pro-31.		H0546: 1 and L0757: 1.		
HSWBE29	412991	1977	12 - 152	4664	Phe-1 to Asn-9.		H0546: 1 and L0756: 1.		
HSWAS65	953051	1978	15 - 404	4665	Leu-15 to Phe-35, Pro-52 to Ser-58.		H0546: 1	17q21	109270, 109270, 109270,

HSWAS18	666302	1979	200 - 418	4666	Lys-1 to Ser-8.	L0744: 3, L0021: 1, H0546: 1, L0768: 1 and L0657: 1.	109270, 109270, 113705, 113705, 144200, 148065, 148066, 148066, 148067, 148067, 148069, 148080, 154275, 168610, 171190, 176705, 185800, 200350, 221820, 232200, 249000, 252920, 253250, 600119, 600119, 601363, 601844
---------	--------	------	-----------	------	-----------------	--	--

HSWAR63	471236	1980	61 - 222	4667	Asn-19 to Asp-30.	H0546: 1	19q13.2	107741, 113900, 122720, 122720, 122720, 126340, 126391, 160900, 164731, 173850, 207750, 248600, 258501
HSWAQ31	697856	1981	194 - 418	4668		H0546: 1		
HPWTA06	936026	1982	71 - 427	4669		H0383: 1 and L0589: 1.		
HPWSA52	727294	1983	155 - 349	4670	Pro-20 to Ser-27.	S0174: 1 and L0755: 1.	6q22.1-q22.3	120110, 121014, 142470, 156225, 164200, 164200, 601316, 601410, 601757
HPWDK45	839559	1984	141 - 533	4671	Lys-9 to Pro-14.	S0044: 1 and L0748: 1.		
HPWDF03	924978	1985	168 - 452	4672		L0749: 4, L0748: 2 and S0044: 1.		
HPWDE86	785710	1986	166 - 291	4673	Cys-13 to Pro-26, Pro-34 to Val-40.	L0754: 2 and S0044: 1.		
HPWCJ90	789170	1987	17 - 397	4674	Cys-1 to Asn-16,	L0731: 2, S0044: 1 and		

							Thr-20 to Asp-44, Ser-47 to Asn-54, Phe-66 to Arg-93.	L0749: 1.		
HPWCG85	638155	1988	461 - 727	4675			Ser-25 to Glu-33, Ser-58 to His-68.	S0044: 1		
	812707	2666	585 - 319	5353			Ser-25 to Glu-33, Ser-58 to His-68.			
HPWBF35	707514	1989	36 - 164	4676			Asn-32 to Thr-40.	S0044: 1 and L0608: 1.		
HPWBE47	720563	1990	251 - 520	4677			Arg-1 to Ile-6, Pro-9 to Met-16, Gly-32 to Arg-37.	S0044: 1 and L0581: 1.		
HPWAT23	676323	1991	73 - 258	4678			Ser-21 to Pro-29, Leu-42 to Ser-52.	S0044: 1 and L0752: 1.		
HPWAJ85	535157	1992	73 - 219	4679			Gln-1 to Gly-11.	S0044: 1 and L0439: 1.		
HPWAJ39	575271	1993	72 - 215	4680				S0044: 1		
HPWAI05	932627	1994	2 - 250	4681			Pro-1 to Pro-9, Ser-36 to Gly-43, Leu-48 to Gln-62.	L0748: 2 and S0044: 1.		
HPWAH19	468246	1995	201 - 1	4682			Pro-13 to Arg-23, Pro-41 to Trp-53, Pro-56 to Lys-65.	S0044: 1		
	867315	2667	27 - 275	5354						
HPWAG31	693618	1996	19 - 165	4683			Arg-28 to Pro-42.	S0044: 1		
HPVAH71	829301	1997	2 - 178	4684				S0013: 1 and L0756: 1.		
HPVAH41	848632	1998	351 - 614	4685			Asp-9 to Phe-18, Pro-44 to Trp-52.	L0748: 2, S0013: 1 and L0743: 1.		
HPVAC74	773298	1999	2 - 637	4686			His-42 to Lys-52.	S0013: 1 and L0740: 1.		
HPVAB16	526124	2000	18 - 155	4687				S0013: 1		
HPVAB01	961017	2001	88 - 261	4688				S0013: 1 and L0746: 1.		

HPRTJ65	753933	2002	391 - 549	4689	Gly-27 to Glu-33, Cys-46 to Lys-53.	H0212: 1, L0750: 1 and L0777: 1.		
HPRTI54	728812	2003	91 - 351	4690		L0605: 2, H0212: 1 and L0748: 1.		
HPRTI16	667652	2004	81 - 470	4691		L0777: 4, H0212: 1, L0809: 1, L0664: 1 and L0750: 1.		
HPRCV66	320393	2005	296 - 472	4692	Ser-1 to Thr-9.	H0032: 1 and L0748: 1.		
HPRCT83	780264	2006	37 - 177	4693		L0731: 2 and H0032: 1.		
HPRCN03	925420	2007	2 - 166	4694		H0032: 1, L0761: 1 and L0758: 1.		
HPRCM12	973740	2008	45 - 278	4695	Lys-11 to Ser-19, Lys-72 to Gln-78.	H0032: 1		
HPRCL72	766311	2009	3 - 248	4696	Lys-4 to Val-12, Ser-23 to Ser-39.	H0032: 1 and L0756: 1.		
HPRCI73	764710	2010	2 - 298	4697		H0032: 1		
HPRCG46	719340	2011	175 - 462	4698	Glu-41 to Ser-46.	H0032: 1 and L0439: 1.		
HPRCD11	967762	2012	2 - 115	4699	Ile-1 to Arg-6, Val-27 to Gly-32.	H0032: 1 and L0748: 1.		
HPRCC22	526623	2013	99 - 236	4700	Arg-6 to Leu-15.	H0032: 1		
HPRCA02	917289	2014	142 - 315	4701	Gln-14 to Tyr-19.	H0032: 1		
	919513	2668	205 - 11	5355	Arg-22 to Asp-27, Gln-36 to Glu-42, Leu-46 to Glu-56.			
HPRBN23	467480	2015	200 - 454	4702	Cys-73 to Lys-82.	H0032: 1		
	486123	2669	484 - 320	5356				

HPRBI87	867409	2670	106 - 282	5357	Met-1 to Asn-9.	H0032: 1 and L0731: 1.	19p13.3-p13.2	108725, 120700, 133171, 136836, 143890, 145981, 147141, 147670, 147670, 147670, 151440, 164953, 188070, 231670, 600276, 600957, 601238, 601843, 601846, 602216, 602477
	695116	2016	93 - 227	4703				
HPRBH80	781636	2017	183 - 344	4704	Set-21 to Gln-27.	H0032: 1 and L0748: 1.		
HPRAV80	781637	2018	1 - 384	4705		L0439: 3 and H0032: 1.		
HPRAN56	503140	2019	338 - 210	4706	Glu-18 to Val-30.	L0756: 3, L0747: 2, L0749: 2, H0032: 1 and L0748: 1.		
	503152	2671	373 - 543	5358				

HPRAN50	724753	2020	300 - 196	4707			H0032: 1		
HPRAJ75	766496	2021	3 - 197	4708	Ser-19 to Cys-35.		H0032: 1		
HPRAG73	764757	2022	267 - 584	4709			H0032: 1 and L0749: 1.		
HPRAG45	484691	2023	281 - 84	4710	Gly-7 to Thr-27, Pro-60 to Gln-66.		H0032: 1		
	939849	2672	3 - 365	5359	Ile-1 to Ser-8, Ser-103 to Pro-108.				
	939850	2673	1 - 57	5360	Arg-9 to Tyr-14.				
HPRAF86	784594	2024	2 - 232	4711	Thr-13 to Met-23.		H0032: 1		
HPOAB37	789290	2025	2 - 406	4712	Ala-1 to Gln-7.		S0004: 1		
HPMSH94	796839	2026	192 - 368	4713	Lys-13 to Lys-18.		H0111: 1 and L0766: 1.		
HPMSB35	707476	2027	30 - 206	4714			H0111: 1 and L0750: 1.		
HPMMK05	928283	2028	558 - 746	4715	Ser-14 to Arg-19, Glu-43 to Ser-54.		L0754: 2, H0644: 1, L0747: 1 and L0750: 1.		
HPMMB08	957945	2029	105 - 299	4716			H0644: 1 and L0755: 1.		
HPMKP06	933895	2030	3 - 248	4717	Gln-48 to Asp-65.		H0644: 1 and L0777: 1.		
HPMKC05	930874	2031	87 - 257	4718	Asn-8 to Asp-28.		H0644: 1 and L0748: 1.		
HPMJT12	969483	2032	242 - 487	4719	Lys-15 to Leu-25, Met-29 to Leu-43.		L0748: 4 and H0644: 1.		
HPMJN08	958009	2033	2 - 259	4720	His-4 to Arg-20.		H0644: 1 and L0748: 1.		
HPMJK11	965636	2034	277 - 516	4721	Ser-42 to Ser-52.		H0644: 1 and L0462: 1.		



HPMJJK03	867615	2035	293 - 436	4722			H0644: 1 and L0700: 1.		
HPMJJI11	965627	2036	61 - 381	4723	Gln-7 to Gly-18, Asp-21 to Met-28.		H0644: 1 and L0774: 1.		
HPMJJE06	939682	2037	169 - 2	4724	Tyr-39 to Arg-56.		H0644: 1, L0606: 1 and L0749: 1.		
HPMJJA11	965628	2038	1 - 327	4725			L0745: 4 and H0644: 1.		
HPMGX92	491004	2039	346 - 158	4726	Glu-36 to Ala-43, Pro-45 to Lys-57.		H0031: 1		
	881472	2674	63 - 350	5361	Leu-20 to Arg-26, Ala-38 to Thr-43, Trp-90 to Ala-96.				
HPMGR15	660374	2040	178 - 378	4727	Pro-18 to Glu-24.		H0031: 1 and L0756: 1.		
HPMGO88	463906	2041	267 - 440	4728			H0031: 1 and L0756: 1.		
HPMGM39	705460	2042	865 - 1128	4729	Thr-1 to Ser-6, Glu-49 to Phe-63.		L0748: 6, H0031: 1, L0747: 1, L0756: 1 and L0596: 1.		
HPMGJ16	662021	2043	85 - 195	4730	Lys-28 to Ser-33.		H0031: 1		
HPMGD63	694518	2044	177 - 380	4731	Gln-6 to Gly-11, Phe-21 to Thr-30, Arg-50 to Thr-63.		H0031: 1 and L0748: 1.		
HPMFX29	690704	2045	6 - 161	4732			L0747: 2 and H0031: 1.		
HPMFL73	867670	2046	203 - 592	4733			H0031: 1		
HPMFC02	920327	2047	112 - 576	4734	Pro-41 to Ala-63, Gly-69 to Gly-81.		L0770: 2, L0779: 2, H0031: 1, L0766: 1,		

HPMFB26	867674	2048	2 - 361	4735	Gly-4 to His-11, Val-61 to Gly-67.	L0776: 1 and L0758: 1. H0031: 1 and L0747: 1.		
HPMEG77	772503	2049	214 - 366	4736	Leu-21 to Val-36, Pro-38 to Gln-44.	L0604: 3 and H0031: 1.		
HPMDQ89	880787	2050	1 - 390	4737	Arg-1 to Phe-9, Arg-69 to Gln-83, Lys-85 to Leu-103, Val-117 to His-122.	L0794: 2 and H0031: 1.		
HPMDP10	968350	2051	1 - 258	4738	Gly-1 to Gln-7, Gly-21 to Val-26, Arg-47 to Arg-55, Lys-71 to Ala-77.	L0794: 2, H0031: 1 and L0779: 1.		
HPMDF06	954567	2052	1 - 111	4739		H0031: 1 and L0455: 1.		
HPMAM93	791407	2053	150 - 1	4740	Lys-42 to Ile-50.	L0439: 2 and H0031: 1.		
HPMAL77	772740	2054	629 - 426	4741		L0748: 3, H0031: 1 and L0731: 1.		
HPMAL73	764752	2055	2 - 169	4742	Ser-2 to Tyr-15.	H0031: 1 and L0745: 1.		
HPMAK71	503690	2056	323 - 442	4743	Leu-7 to Leu-12, Asn-14 to His-27, Pro-30 to Lys-37.	H0031: 1		
HPMAJ83	781518	2057	156 - 410	4744		H0031: 1 and L0748: 1.		
HPMAI80	572808	2058	2 - 154	4745	Arg-27 to Thr-46.	H0031: 1		
HPMAI10	968695	2059	215 - 63	4746		H0031: 1		
HPMAH85	783344	2060	84 - 233	4747	Lys-1 to Lys-8.	H0031: 1 and L0740: 1.		

HPLMAH56	867711	2061	156 - 296	4748			1.			
HPLMAB10	968723	2062	3 - 221	4749	Pro-3 to Gly-11, Ser-43 to Leu-55.		H0031: 1			
HPLBW22	679217	2063	3 - 278	4750	Glu-8 to His-17, Gln-19 to Gly-43, Thr-62 to Ser-73, Pro-80 to Leu-85.		H0030: 1 and L0595: 1.			
HPLBW02	921331	2064	338 - 499	4751			L0777: 2 and H0030: 1.			
HPLBT54	731065	2065	179 - 343	4752	Pro-1 to Ala-12, Gly-33 to Gln-38.		H0030: 1 and L0754: 1.			
HPLBT53	728517	2066	283 - 450	4753	Ile-36 to Gly-47.		H0030: 1 and L0758: 1.			
HPLBS41	712707	2067	359 - 559	4754	Pro-16 to Ser-23.		L0747: 2 and H0030: 1.			
HPLBQ96	796069	2068	18 - 155	4755	Lys-6 to Asn-12.		H0030: 1 and L0754: 1.			
HPLBO90	787208	2069	202 - 348	4756	Leu-30 to Cys-39.		H0030: 1 and L0751: 1.			
HPLBN79	781854	2070	144 - 326	4757	Glu-4 to Arg-9, Thr-17 to Lys-23.		H0030: 1 and L0756: 1.			
HPLBB47	975477	2071	745 - 491	4758	Lys-22 to Ser-39.		L0518: 2, H0030: 1 and L0740: 1.			
HPLAX14	727885	2072	85 - 489	4759	Ser-7 to Gly-15, Pro-66 to Trp-73, Thr-96 to Gly-101, Gly-109 to Arg-133.		H0030: 1, L0747: 1 and L0750: 1.			
HPLAV44	715732	2073	197 - 3	4760	His-23 to Asn-37.		H0030: 1 and L0748:			

HPJAI10	968707	2074	54 - 461	4761	Ser-14 to Phe-20.	1. H0030: 1, L0517: 1, L0740: 1, L0754: 1, L0777: 1, L0755: 1 and L0758: 1.		
	968711	2675	659 - 372	5362	Leu-3 to Lys-8, Arg-27 to Ser-34, Leu-45 to Lys-55.			
HPJFA10	963322	2075	466 - 341	4762	Gln-9 to Ala-15.	L0783: 1, L0809: 1 and S0152: 1.		
HPJEV95	929723	2076	82 - 408	4763		AR061: 4, AR089: 1 S0152: 1 and L0601: 1.		
HPJEU01	928408	2077	209 - 352	4764		S0152: 1 and L0439: 1.		
HPJET11	965894	2078	136 - 327	4765	Lys-35 to Lys-42.	L0717: 1, S0152: 1 and L0756: 1.		
HPJES17	859867	2079	19 - 318	4766	Glu-8 to Cys-16.	L0435: 1, S0152: 1, L0439: 1 and L0747: 1.		
HPJEL02	918315	2080	50 - 220	4767	Pro-26 to Phe-35.	S0152: 1 and L0745: 1.		
HPJEG53	974074	2081	19 - 198	4768		S0152: 1		
HPJDW93	867759	2082	44 - 406	4769		S0152: 1 and L0604: 1.		
HPJDT03	922815	2083	177 - 392	4770		S0152: 1 and L0759: 1.		
HPJDP54	949149	2084	155 - 301	4771		L0532: 1 and S0152: 1.		
HPJDF61	889928	2085	280 - 417	4772		AR054: 38, AR051: 29, AR050: 28 S0152: 1		
HPJDC01	915056	2086	212 - 358	4773	Asn-17 to Met-22.	S0152: 1 and L0779: 1.		
HPJDA25	951281	2087	246 - 506	4774	Gln-1 to Cys-17, Gln-20 to Lys-28, Pro-35 to Ser-44.	AR061: 6, AR089: 2 S0152: 1		

	951284	2676	252 - 13	5363				
HPJCU29	928407	2088	1 - 195	4775			L0667: 1 and S0152: 1.	
HPJCT81	494874	2089	148 - 396	4776	Thr-2 to Asn-8, Asn-49 to Ser-54.		S0152: 1 and L0605: 1.	
HPJCT26	559949	2090	210 - 635	4777	Arg-1 to Gly-7.		AR054: 34 S0152: 1	
HPJCS73	975087	2091	3 - 227	4778	Ser-33 to Lys-41.		S0152: 1	
HPJCS43	715082	2092	62 - 322	4779	Pro-10 to Ser-17, Ser-19 to Arg-24, Pro-43 to Glu-50, Arg-56 to Phe-64, Pro-74 to His-87.		S0152: 1	
HPJCS32	699046	2093	179 - 274	4780	Val-23 to Leu-31.		S0152: 1	
HPJCN60	887600	2094	1 - 210	4781	Ile-20 to Trp-33, Thr-35 to Gly-45.		AR051: 17, AR050: 9, AR054: 8 S0152: 1	
HPJCL55	670083	2095	458 - 291	4782	Glu-11 to His-16.		L0758: 3, L0779: 2 and S0152: 1.	
HPJBU40	710928	2096	137 - 373	4783			L0748: 2 and S0152: 1.	
HPJBU09	625362	2097	3 - 182	4784	Arg-14 to Cys-22.		L0439: 2 and S0152: 1.	
HPJBS74	765390	2098	310 - 591	4785			S0152: 1 and L0592: 1.	
HPJBS52	726535	2099	141 - 518	4786	Phe-2 to Asp-8.		S0152: 1 and L0743: 1.	
HPJBS35	867818	2100	64 - 249	4787			S0152: 1 and L0748: 1.	
HPJBL76	769889	2101	340 - 546	4788			S0152: 1, L0740: 1 and L0750: 1.	
HPJBL30	948721	2102	354 - 145	4789	Tyr-10 to Leu-15, Glu-32 to Gly-41.		L0752: 7, L0780: 2, L0586: 1 and S0152: 1.	
HPJBK25	974606	2103	17 - 154	4790	His-15 to Gln-26, Ser-38 to Asn-46.		S0152: 1	

HPJBK14	974593	2104	2 - 331	4791	Pro-8 to Leu-18, Gly-45 to Ala-53, Pro-56 to Trp-63, Pro-67 to Arg-73.	S0152: 1		
HPJBH45	717088	2105	252 - 404	4792	Ser-7 to Lys-12.	L0754: 2 and S0152: 1.		
HPJAX30	607408	2106	762 - 544	4793		S0152: 1		
	884685	2677	104 - 370	5364	Ser-41 to Trp-46, Cys-57 to Gln-68, Tyr-79 to Gly-84.			
	885717	2678	643 - 1290	5365				
HPJAU73	806718	2107	170 - 319	4794		S0152: 1 and L0748: 1.		
HPJAP92	887830	2108	164 - 322	4795		AR050: 26, AR051: 20, AR054: 10 S0152: 1		
HPJAO13	824243	2109	716 - 531	4796	Ser-2 to Arg-7.	AR061: 2, AR089: 1 S0152: 1		
	892302	2679	865 - 1110	5366	Gln-10 to Leu-26.			
	945194	2680	127 - 612	5367				
HPJAN69	754858	2110	79 - 360	4797	Pro-75 to Phe-84.	S0152: 1		
HPJAN67	751384	2111	3 - 176	4798		S0152: 1		
HPJAN57	734503	2112	65 - 166	4799		S0152: 1		
HPJAJ20	669000	2113	476 - 652	4800	Thr-31 to Glu-37.	S0152: 1 and L0439: 1.		
HPJAE51	725761	2114	193 - 2	4801	Ser-42 to Lys-48.	L0439: 2 and S0152: 1.		
HPJAA27	419786	2115	3 - 278	4802	Leu-17 to Asn-31, Gly-55 to Ala-62, Arg-66 to Ala-87.	S0152: 1	1q32.1	134580, 145260, 600105, 600759, 601975
HPICG93	887817	2116	20 - 310	4803	Leu-62 to Ser-75.	AR051: 32, AR050:		

							26, AR054: 17 S0150: 1			
HPICE06	935095	2117	607 - 816	4804			S0150: 1, L0439: 1 and L0740: 1.			
HPIBY36	708183	2118	296 - 517	4805			L0439: 2, L0756: 2, S0150: 1 and L0438: 1.			
HPIBT62	743135	2119	123 - 362	4806			S0150: 1, L0748: 1 and L0439: 1.			
HPIBO89	786741	2120	213 - 473	4807		Lys-79 to Phe-85.	L0439: 3, S0150: 1, L0740: 1 and L0749: 1.			
HPIBI89	867845	2121	1 - 135	4808		Glu-7 to Ser-13.	S0150: 1 and L0748: 1.			
HPIBH31	838809	2122	169 - 420	4809		Val-3 to Gly-14, Ser-65 to Gly-72.	S0150: 1 and L0748: 1. 2p22-p21			120435, 120435, 126600, 135300, 136435, 152790, 152790, 157170, 182601, 278300, 601071, 601771, 602134
HPIBC93	785971	2123	1 - 285	4810		Ser-49 to Pro-54, Pro-60 to His-70.	S0150: 1 and L0751: 1.			
HPIBB45	867850	2124	77 - 178	4811			S0150: 1			
HPIBB43	715037	2125	47 - 247	4812			S0150: 1			
HPIBB32	698901	2126	1 - 186	4813			S0150: 1			
HPIBB19	668489	2127	182 - 289	4814			S0150: 1			

HPIAW91	790033	2128	223 - 426	4815	Ala-6 to Ser-25.	L0748: 2 and S0150: 1.		
HPIAV06	935111	2129	41 - 322	4816	Cys-19 to Trp-24, Ser-29 to Glu-34, Phe-47 to Trp-52, Arg-57 to Gly-68.	L0717: 2 and S0150: 1.		
HPIAQ70	973604	2130	185 - 436	4817	Gly-36 to Thr-41.	AR089: 18, AR061: 9 S0150: 1		
HPIAP79	774817	2131	102 - 476	4818	Asp-7 to Thr-15.	L0439: 6 and S0150: 1.		
HPIAD10	906987	2132	547 - 834	4819	Lys-91 to Pro-96.	S0150: 1 and L0365: 1.		
	961313	2681	172 - 35	5368				
HPHSB91	790313	2133	157 - 273	4820	Val-33 to Lys-39.	S0176: 1		
HPHSB21	671118	2134	52 - 189	4821		S0176: 1		
HPHSA94	793084	2135	3 - 209	4822		S0176: 1		
HPHAE81	778036	2136	417 - 127	4823		S0148: 1 and L0748: 1. 19q13.1	164731, 172400, 172400, 180901, 180901, 221770, 248600, 600918, 602716	
HPFMG06	933696	2137	1 - 120	4824		H0674: 1 and L0362: 1.		
HPFMB10	961758	2138	414 - 683	4825	Lys-2 to Lys-10.	H0674: 1 and L0363: 1.		
HPFDX38	709302	2139	398 - 583	4826		H0169: 1 and L0766: 1.		
HPFCZ82	780198	2140	3 - 341	4827	Pro-108 to Gly-113.	H0169: 1 and L0747:		



HPFCZ60	430125	2141	298 - 444	4828		1.	H0169: 1 and L0740: 1.		
HPFCZ10	968360	2142	33 - 272	4829			H0169: 1		
HPFCR23	675120	2143	93 - 263	4830		Thr-52 to Tyr-57.	H0169: 1, L0809: 1 and L0754: 1.		
HPFCP82	867881	2144	435 - 632	4831		Pro-24 to Gly-44, Pro-47 to Tyr-56.	AR050: 7, AR054: 3, AR051: 1 H0169: 1		
HPFCP53	526574	2145	138 - 245	4832			AR050: 20, AR051: 4, AR054: 4 H0169: 1		
HPFCM45	723501	2146	72 - 251	4833			H0169: 1, L0766: 1, L0776: 1, L0790: 1, L0741: 1 and L0779: 1.		
HPFCM27	682098	2147	178 - 294	4834			L0598: 2, H0169: 1 and L0731: 1.		
HPFCL56	732601	2148	20 - 187	4835		Cys-6 to His-17.	H0169: 1 and L0777: 1.		
HPFCL24	867889	2149	56 - 274	4836			L0752: 2, H0169: 1, L0794: 1 and L0751: 1.		
HPFCG02	921196	2150	94 - 261	4837		Gly-33 to Arg-39.	H0169: 1 and L0748: 1.		
HPFCA01	928672	2151	151 - 393	4838		Gly-18 to His-30.	L0748: 2 and H0169: 1.		
HPELD12	969248	2152	231 - 623	4839		Gly-18 to Glu-29, Leu-55 to Gln-60, His-109 to Gly-117, Gly-122 to Pro-127.	H0673: 1, L0805: 1 and L0731: 1.		

HPEKI04	926104	2153	43 - 165	4840			L0748: 2, H0673: 1 and L0749: 1.		
HPEKE01	914414	2154	159 - 350	4841			H0673: 1, L0769: 1 and L0768: 1.		
HPEBT82	524246	2155	1 - 111	4842			H0166: 1		
HPEBT78	773844	2156	59 - 148	4843		Lys-15 to Gly-25.	H0166: 1		
HPEBT68	753692	2157	45 - 245	4844		Lys-9 to Trp-17.	H0166: 1		
HPEBT54	731002	2158	86 - 397	4845		Lys-26 to Cys-31, Arg-38 to Asp-46.	H0166: 1		
HPEBT49	530021	2159	106 - 300	4846		Leu-12 to Ser-17.	H0166: 1		
HPEBT34	706836	2160	44 - 301	4847		Asp-20 to His-27.	H0166: 1		
HPEBT14	535061	2161	3 - 98	4848			H0166: 1		
HPEBT07	954214	2162	42 - 317	4849		Thr-78 to Arg-84.	H0166: 1		
HPEBO67	578516	2163	1 - 228	4850		Glu-12 to Thr-39.	H0166: 1, L0748: 1 and L0747: 1.		
HPEBL08	960240	2164	227 - 313	4851		Lys-19 to Asn-27.	L0770: 2, H0166: 1, L0665: 1 and L0749: 1.		
HPEBH01	921767	2165	105 - 341	4852			H0166: 1 and L0745: 1.		
HPEBG89	785942	2166	80 - 277	4853		Gly-2 to Cys-7, Glu-28 to Glu-40, Glu-53 to Lys-58.	L0759: 2 and H0166: 1.		
HPEBG10	867888	2167	75 - 284	4854		Phe-26 to Trp-32.	H0166: 1 and L0542: 1.		
HPEBA89	910250	2168	268 - 504	4855		Cys-14 to Ser-26, Glu-40 to Lys-58.	AR061: 57, AR089: 38 H0166: 1 and L0749: 1.		
	912272	2682	182 - 361	5369		Cys-14 to Ser-26, Glu-40 to Lys-60.			

HPEBA61	742251	2169	2 - 70	4856			H0166: 1		
HPEBA05	928027	2170	2 - 178	4857	Gly-14 to Ser-19.		H0166: 1 and L0779: 1.		
HPEAG43	468542	2171	83 - 232	4858			H0165: 1		
	589933	2683	776 - 1117	5370	Pro-4 to Thr-17.				
HPEAD72	761472	2172	45 - 383	4859			H0165: 1 and L0744: 1.		
HPEAB12	968847	2173	2 - 178	4860	Ser-7 to Lys-13, Leu-29 to Ser-36.		L0794: 4 and H0165: 1.		
HPEAA57	514231	2174	199 - 414	4861	Leu-11 to Ala-18, Gly-22 to Ser-41.		H0165: 1		
HPEAA40	867899	2175	186 - 308	4862			H0165: 1 and L0526: 1.		
HPDWR11	965249	2176	261 - 548	4863	Gly-1 to Thr-13, Arg-37 to Ser-45, Arg-52 to Asn-73.		L0759: 2, L0769: 1, L0768: 1, L0794: 1, L0805: 1, H0658: 1, L0750: 1 and L0777: 1.		
HPDWN05	928563	2177	287 - 472	4864			L0439: 2, L0717: 1, L0803: 1, H0658: 1 and L0777: 1.		
HPDVM01	913859	2178	311 - 433	4865			L0779: 2 and H0658: 1.		
HPDVD11	965276	2179	25 - 117	4866	Ala-10 to Lys-18.		H0658: 1 and L0779: 1.		
HPDRU11	965307	2180	118 - 342	4867	Gly-13 to Trp-21.		H0658: 1 and L0756: 1.		
HPDRR06	968601	2181	448 - 74	4868	Pro-65 to His-76, Asn-110 to Phe-118.		L0666: 2, L0766: 1, L0655: 1 and H0658: 1.		
HPDRN07	951838	2182	54 - 299	4869	Asp-11 to Asn-17.		H0658: 1 and L0604: 1.		

HPDRG01	914416	2183	339 - 674	4870			1. L0748: 2, H0658: 1 and L0750: 1.		
HPDPS12	969342	2184	1 - 255	4871	Arg-10 to Gln-16, Pro-24 to Gly-30.		H0658: 1, L0777: 1 and L0592: 1.		
HPDPP12	969341	2185	3 - 179	4872	Thr-1 to Asn-13, Pro-35 to Lys-42.		L0523: 1 and H0658: 1.		
HPDPC08	957822	2186	120 - 398	4873	Arg-23 to Val-29.		H0658: 1	13	
HPDOW10	961782	2187	280 - 429	4874	Met-6 to His-12.		L0766: 2, L0776: 2, H0658: 1 and L0779: 1.		
HPDOO10	961881	2188	338 - 520	4875			L0769: 3 and H0658: 1.		
HPDOF11	965491	2189	30 - 227	4876			L0770: 2 and H0658: 1.		
HPCTK02	917480	2190	207 - 446	4877			H0659: 1, L0740: 1 and L0756: 1.		
HPCTD03	922149	2191	3 - 332	4878			AR089: 6, AR061: 2 H0659: 1		
HPCTC04	925777	2192	150 - 347	4879	Arg-40 to Gln-47.		L0659: 2, H0659: 1 and L0779: 1.		
HPCQQ07	951646	2193	2 - 328	4880	Arg-6 to Arg-11.		L0805: 1, L0776: 1 and H0659: 1.		
HPCPM63	954940	2194	85 - 222	4881			L0800: 1, H0659: 1 and L0747: 1.		
HPCOV68	911075	2195	97 - 249	4882			AR089: 23, AR061: 7 L0439: 2, L0369: 1 and H0659: 1.		
HPCAO89	946913	2196	1 - 369	4883	Pro-18 to Gln-28, Gln-42 to Asn-49,		AR050: 18, AR054: 18, AR089: 5, AR051:		

						Ser-72 to Arg-81.	4, AR061: 2 L0761: 1 and S0146: 1.			
HPCAK66	320415	2197		85 - 237	4884	Lys-9 to Tyr-14, Glu-44 to His-50.	S0146: 1			
HPCAG81	778177	2198		190 - 348	4885		S0146: 1 and L0754: 1.			
HPCAF65	573368	2199		75 - 275	4886	Asp-38 to Ala-43.	S0146: 1			
HPCAD17	584754	2200		465 - 271	4887	Glu-16 to Glu-27, Glu-35 to Ser-46, Glu-56 to Ala-64.	S0146: 1			
	584755	2684		145 - 312	5371					
HPCAB54	728857	2201		2 - 409	4888	Gly-1 to Gly-11.	S0146: 1 and L0591: 1.			
HPCAB45	575233	2202		8 - 247	4889	Pro-21 to Thr-40.	S0146: 1			
HOVEV01	914553	2203		49 - 540	4890	Gly-50 to Thr-57, Gln-60 to Trp-74, Glu-86 to Cys-96, Met-106 to Gly-124.	L0748: 3, L0603: 2, H0428: 1, L0771: 1, L0749: 1 and L0757: 1.			
HOVEU10	961865	2204		170 - 328	4891		H0428: 1			
HOVEU06	933737	2205		106 - 201	4892		H0428: 1			
HOVEO04	926209	2206		18 - 179	4893	Ser-27 to Gly-32.	H0428: 1 and L0750: 1.			
HOVEE20	909030	2207		88 - 444	4894	Asn-7 to Met-12, Cys-38 to Thr-44.	AR089: 7, AR061: 2 H0428: 1			
HOVDD82	948619	2208		2 - 172	4895	Arg-2 to Cys-11, Cys-15 to Gly-20.	H0428: 1 and L0766: 1.			
HOVDD10	961887	2209		3 - 323	4896	Glu-25 to Pro-39, Thr-44 to Tyr-50, Pro-53 to Gln-60, Ser-67 to Val-82.	H0428: 1 and L0462: 1.			
HOVCP77	772210	2210		120 - 299	4897	Tyr-17 to Gln-23,	L0439: 12 and H0428:			

HOVCO50	932544	2211	425 - 586	4898	Lys-32 to Ser-38.	1. H0428: 1, L0752: 1 and L0759: 1.		
HOVCN57	734779	2212	143 - 301	4899	Lys-1 to Gln-12, Cys-44 to Lys-49.	H0428: 1 and L0744: 1.		
HOVCM77	772208	2213	107 - 265	4900	Arg-30 to Lys-39.	H0428: 1 and L0439: 1.		
HOVCM03	924196	2214	159 - 257	4901	Glu-10 to Thr-18.	H0428: 1 and L0750: 1.		
HOVCI89	786917	2215	194 - 322	4902		H0428: 1		
HOVCI08	959470	2216	938 - 75	4903	Pro-43 to Ser-49.	H0428: 1, L0743: 1, L0744: 1, L0747: 1, L0752: 1 and L0592: 1.		
HOVCD33	702445	2217	124 - 252	4904	Asp-33 to Val-38.	L0439: 2 and H0428: 1.		
HOVCC57	465313	2218	210 - 380	4905		H0428: 1 and L0581: 1.		
HOVBQ07	858863	2219	200 - 604	4906	Asp-1 to Val-13, Ser-17 to Ser-26.	H0428: 1, L0764: 1 and L0758: 1.		
HOVBK69	757594	2220	116 - 424	4907		H0428: 1 and L0740: 1.		
HOVBK38	956238	2221	33 - 263	4908		L0766: 2, H0428: 1, L0775: 1, L0782: 1, L0783: 1, L0748: 1 and L0758: 1.		
HOVBK24	858857	2222	75 - 353	4909	Gln-1 to Leu-7, Ser-32 to His-42.	H0428: 1, L0748: 1 and L0581: 1.		
HOVBI67	751665	2223	155 - 355	4910		L0749: 2 and H0428: 1.		

HOVBI20	669730	2224	1 - 183	4911		H0428: 1 and L0748: 1.		
HOVAZ89	904818	2225	2 - 298	4912	Glu-14 to Pro-19, Arg-24 to Arg-36, Arg-85 to His-90.	H0428: 1		
HOVAZ65	750273	2226	275 - 457	4913		L0740: 2 and H0428: 1.		
HOVAY88	827077	2227	203 - 409	4914	Asn-20 to Lys-25.	H0428: 1		
HOVAY58	736077	2228	179 - 388	4915	Val-1 to Thr-11, Tyr-23 to Leu-31, Arg-47 to Thr-52.	H0428: 1 and L0754: 1.		
HOVAY42	713812	2229	168 - 320	4916	Asn-20 to Glu-26.	H0428: 1		
HOVAY03	921959	2230	147 - 1	4917		H0428: 1		
HOVAW62	745704	2231	2 - 247	4918		L0516: 2, H0428: 1 and L0753: 1.		
HOVAO25	678163	2232	112 - 270	4919		H0428: 1 and L0748: 1.		
HOVAN51	725005	2233	3 - 122	4920		L0748: 5, H0428: 1 and L0749: 1.		
HOVAJ07	953422	2234	279 - 452	4921	Lys-40 to Phe-47.	H0428: 1 and L0743: 1.		
HOVAI05	932093	2235	2 - 199	4922	Val-41 to Lys-46.	H0428: 1 and L0752: 1.		
HOVAF07	953553	2236	22 - 102	4923		H0428: 1		
HOVAF01	916770	2237	245 - 3	4924	Phe-58 to Arg-67, Leu-71 to Thr-77.	H0428: 1		
HOVAC77	578783	2238	181 - 366	4925		H0428: 1		
HOVAC54	578809	2239	36 - 197	4926	Ile-23 to Cys-35.	H0428: 1 and L0748: 1.		

HOVAC26	578810	2240	45 - 278	4927	Gln-12 to Gly-17, Ser-28 to Pro-39.	H0428: 1		
HOVAB85	578788	2241	3 - 407	4928	Asp-1 to Arg-6, Thr-31 to Leu-43, Val-53 to His-59, Pro-61 to Val-73, Ser-81 to Ser-96.	H0428: 1		
HOVAB61	578791	2242	256 - 477	4929		L0756: 2, L0361: 2, H0428: 1, L0598: 1 and L0592: 1.		
HOOKF10	961499	2243	210 - 359	4930	Lys-38 to Lys-50.	L0776: 1 and H0648: 1.		
HOOKF04	925784	2244	508 - 239	4931	Thr-31 to Lys-40.	L0758: 3, L0779: 2, H0648: 1 and L0740: 1.		
HOOU04	925774	2245	17 - 283	4932		H0648: 1 and L0777: 1.		
HOON04	925783	2246	3 - 260	4933	Arg-21 to Leu-27.	L0770: 1, L0794: 1, L0804: 1 and H0648: 1.		
HOONK11	965292	2247	205 - 420	4934	Pro-48 to Phe-72.	H0648: 1 and L0750: 1.		
HOONH05	928627	2248	37 - 210	4935	Val-16 to Thr-26, Pro-30 to Ser-36, Pro-53 to Glu-58.	L0758: 3 and H0648: 1.		
HOONJ02	917454	2249	248 - 379	4936	Lys-34 to Gly-41.	H0648: 1 and L0758: 1.		
HOONL05	928644	2250	280 - 444	4937	Pro-42 to Asp-55.	L0751: 3, L0764: 1, L0518: 1, H0648: 1, L0747: 1 and L0752: 1.		
HOONIG03	922510	2251	2 - 205	4938	Glu-34 to Glu-44.	H0648: 1 and L0596: 1.		



HOOHP02	917424	2252	210 - 374	4939	Phe-13 to Gln-24.	H0648: 1, L0748: 1, L0751: 1, L0754: 1 and L0749: 1.		
HOOHE67	969061	2253	1 - 171	4940		H0648: 1, L0754: 1 and L0750: 1.		
HOOHD06	933873	2254	1 - 150	4941	Arg-1 to Cys-10, Lys-17 to Gly-24.	L0666: 1 and H0648: 1.		
HOOAB23	522227	2255	249 - 49	4942	His-1 to Gln-7, Gly-14 to Gly-23, Leu-50 to Arg-67.	H0028: 1 and L0792: 1.		
HOOAB05	932925	2256	196 - 579	4943	Ser-66 to Pro-76.	H0028: 1 and L0777: 1.		
HONAK10	968610	2257	3 - 116	4944	Glu-1 to Lys-6.	L0766: 1 and T0068: 1.		
HONAH06	936029	2258	677 - 333	4945		AR051: 655, AR050: 494, AR054: 346 T0068: 1		
HONAE50	723571	2259	344 - 559	4946	Gly-18 to Thr-32.	T0068: 1 and L0749: 1.		
HONAD65	747152	2260	174 - 290	4947	Ser-6 to Lys-14.	T0068: 1 and L0592: 1.		
HONAD02	859016	2261	732 - 1040	4948		AR061: 1, AR089: 1 T0068: 1 and L0779: 1.		
HOGEW23	973221	2262	2 - 145	4949	Ser-1 to Gly-11.	H0435: 1		
HOGDQ03	922578	2263	163 - 414	4950		L0774: 1 and H0435: 1.		
HOGCW89	973227	2264	484 - 732	4951	Lys-10 to Asn-16.	H0435: 1		
HOGCT13	657284	2265	389 - 763	4952		L0439: 2 and H0435: 1.		
HOGCR31	463874	2266	205 - 441	4953		H0435: 1 and L0743: 1.		
HOGCR10	964761	2267	1 - 240	4954		H0435: 1 and L0748: 1.		

HOGCQ54	859076	2268	3 - 608	4955	Ser-19 to Asp-31.	1.	L0766: 3 and H0435:		
HOGCH05	930813	2269	2 - 202	4956		1.	H0435: 1 and L0748:	9q31.2	223900, 253800, 253800
HOGCE07	859077	2270	126 - 509	4957		1.	L0369: 1 and H0435:		
HOGCD61	761991	2271	247 - 393	4958			H0435: 1		
HOGCC63	745130	2272	101 - 241	4959	Gly-2 to Tyr-8.	1.	L0745: 2 and H0435:		
HOGCA65	750308	2273	298 - 501	4960	Arg-8 to Leu-17.	1.	L0748: 2 and H0435:		
HOGBJ26	847191	2274	208 - 50	4961	Ser-17 to Trp-23.	1.	H0435: 1 and L0439:		
HOGBE27	682232	2275	2 - 163	4962	Arg-1 to Phe-13.	1.	H0435: 1 and L0747:		
HOGAM56	908904	2276	973 - 779	4963			H0435: 1		
HOGAI73	764490	2277	227 - 379	4964	Lys-3 to Phe-8.	1.	H0435: 1 and L0777:		
HOGAI26	681919	2278	221 - 397	4965	Arg-1 to Gly-19, Lys-35 to Trp-43.	1.	L0748: 2 and H0435:		
HOGAH71	760431	2279	163 - 369	4966	Asp-22 to His-28, Arg-49 to Ser-54.	1.	H0435: 1 and L0596:		
HOGAG57	734848	2280	2 - 634	4967	Lys-10 to Ser-15, Arg-44 to Ser-62, Glu-78 to Thr-83, Lys-115 to Phe-124, Glu-137 to Asp-148,		L0747: 2, H0435: 1, L0742: 1, L0596: 1 and L0591: 1.		

						Gly-165 to His-171, Glu-189 to Lys-211.					
HOGAD77	772319	2281	298 - 576	4968				L0748: 2 and H0435: 1.			
HOGAC69	756713	2282	578 - 324	4969				H0435: 1			
HOFNW81	789232	2283	46 - 336	4970		Asp-48 to Glu-53, Pro-72 to Ser-81.		H0415: 1			
HOFNW69	533713	2284	213 - 28	4971		Glu-17 to His-23, His-26 to Ser-34, Gly-40 to Glu-45.		H0415: 1	1q21	104770, 107670, 110700, 135940, 145001, 146790, 152445, 152445, 159001, 174000, 179755, 182860, 182860, 182860, 191315, 230800, 230800, 266200, 600897, 601105, 601412, 601652, 602491	

HOFNW68	753048	2285	1 - 132	4972	Lys-18 to Asp-23.	H0415: 1		
HOFNW65	815822	2286	3 - 431	4973	Arg-14 to Asn-19, Ala-35 to Ser-45, Gln-74 to Glu-90.	AR089: 5, AR061: 3 H0415: 1		
HOFNW45	720755	2287	2 - 118	4974	Asn-12 to Glu-19, Lys-30 to Phe-35.	H0415: 1		
HOFNW07	953436	2288	37 - 411	4975	Arg-10 to Arg-19, Asn-50 to Ser-61, Met-65 to Lys-71, Ala-83 to Asn-89.	H0415: 1		
HOFNU50	724437	2289	3 - 347	4976	Phe-5 to Pro-10, Gln-71 to Ser-77, Lys-86 to Glu-91.	L0748: 2 and H0415: 1.		
HOFNL96	888569	2290	3 - 380	4977	Pro-3 to Ala-17, Asn-56 to Asp-62, Gln-85 to Gly-100.	H0415: 1		
HOFNI90	788947	2291	90 - 323	4978	Gln-1 to Ser-6, Ser-36 to Ser-45, Leu-47 to Pro-54, Arg-59 to Gly-69.	H0415: 1		
HOFNI85	784366	2292	1 - 138	4979		H0415: 1		
HOFNI72	760643	2293	52 - 273	4980		H0415: 1		
HOFNI71	760392	2294	59 - 253	4981	Arg-1 to Arg-6.	H0415: 1		
	773729	2685	1 - 177	5372	Gly-9 to His-30, Arg-48 to Pro-57.			
HOFNI58	859094	2295	151 - 351	4982		H0415: 1		
HOFNI56	859093	2296	166 - 408	4983	Gln-7 to Gly-15.	H0415: 1		
HOFNI42	713816	2297	111 - 302	4984		H0415: 1		
HOFNI37	859102	2298	35 - 232	4985		H0415: 1		

HOFNI33	859103	2299	3 - 263	4986			H0415: 1		
HOFNI32	699299	2300	2 - 217	4987	Gly-1 to Gly-11, Thr-59 to Gly-64.		H0415: 1		
HOFNI10	964682	2301	2 - 193	4988			H0415: 1		
HOFNI02	917347	2302	1 - 201	4989	Gln-16 to Gln-23.		H0415: 1		
HOFNC80	835718	2303	1 - 315	4990	Ser-9 to Lys-18.		AR051: 12, AR050: 12, AR054: 10, AR061: 2, AR089: 1		
HOFNC79	774037	2304	139 - 243	4991	Glu-21 to Asp-26.		H0415: 1		
HOFNB63	613681	2305	179 - 3	4992			H0415: 1		
HOFNB55	731801	2306	2 - 67	4993	Arg-1 to Thr-15.		H0415: 1		
HOFNB51	725684	2307	187 - 432	4994	Arg-18 to Lys-24.		H0415: 1		
HOFMU70	489858	2308	2 - 154	4995	Arg-18 to Gly-24.		H0415: 1		
HOFMU67	743184	2309	256 - 528	4996	Gln-85 to Pro-91.		H0415: 1		
HOFMU29	824242	2310	993 - 625	4997			H0415: 1		
HOFMT55	888552	2311	87 - 239	4998	Val-17 to Glu-24.		AR050: 84, AR054: 73, AR051: 55, AR089: 21, AR061: 8		
HOFMT45	891512	2312	3 - 269	4999	Asp-1 to Leu-10, Glu-38 to Cys-74.		AR051: 10, AR054: 9, AR050: 2		
HOFMS43	947973	2313	3 - 359	5000	Asp-1 to Asp-17, Pro-61 to Asn-66, Tyr-84 to Tyr-90, Ser-103 to Trp-110.		H0415: 1		
HOFMS09	972725	2314	3 - 461	5001			AR051: 15, AR050: 9, AR089: 7, AR061: 5, AR054: 1		
							H0415: 1		

HOFMP09	943358	2315	1 - 372	5002	Ala-74 to Gly-84, Arg-98 to Lys-104.	AR089: 20, AR061: 9 H0415: 1		
HOFMI25	491360	2316	145 - 2	5003	Lys-28 to Val-33, Gln-40 to Gly-48.	H0415: 1		
	859125	2687	3 - 839	5374	Asn-33 to Leu-38.			
HOFMF82	693987	2317	2 - 169	5004	Thr-1 to Lys-7, Ala-17 to Arg-33, His-35 to Asn-45, Glu-47 to Arg-52.	AR089: 2, AR061: 1 H0415: 1		
	694062	2688	3 - 476	5375	Phe-8 to Ser-21, Ile-28 to Arg-33, Ile-40 to Gly-49, Ala-56 to Gln-61, Gln-69 to Ser-76, Ala-91 to Tyr-96, Thr-119 to Cys-126, Ser-132 to Arg-144, Thr-147 to Asp-158.			
	909248	2689	1 - 447	5376	Arg-17 to Leu-32, His-43 to Cys-54.			
HOFMF81	788733	2318	3 - 395	5005	Asp-1 to Asn-6, Met-46 to Phe-53.	H0415: 1		
HOFMF19	888780	2319	2 - 397	5006	Arg-1 to Gly-14, Glu-35 to Leu-42, Thr-54 to Lys-61.	AR050: 21, AR051: 10, AR054: 9 H0415: 1		
	942367	2320	271 - 993	5007		H0414: 1		
HOFAF25	886485	2321	3 - 527	5008	Pro-19 to Arg-27, Ser-36 to Asn-42, His-101 to Pro-107, Gly-150 to Gln-155,	AR054: 15, AR051: 3, AR050: 0 H0414: 1		

HODKG07	951875	2322	3 - 143	5009	Ser-167 to Thr-175.	L0623: 2, H0615: 1 and L0519: 1.		
HODJU05	929321	2323	91 - 309	5010	Gly-13 to Ser-20, Arg-41 to Thr-47.	H0615: 1, L0435: 1 and L0759: 1.		
HODJL04	926200	2324	128 - 328	5011	Arg-52 to Asn-61.	H0615: 1, L0520: 1 and L0766: 1.		
HODHK07	952193	2325	114 - 278	5012	Thr-26 to Ser-33.	H0615: 1 and L0754: 1.		
HODHG11	966063	2326	338 - 610	5013	Arg-1 to Val-10, Tyr-12 to Tyr-20, Arg-47 to Ser-63.	H0615: 1 and L0758: 1.		
HODGL88	859300	2327	461 - 610	5014	Arg-8 to Arg-16.	L0471: 1, H0615: 1, L0748: 1 and L0749: 1.		
HODGJ02	918476	2328	237 - 368	5015		L0471: 1, H0615: 1 and L0748: 1.		
HODFY10	963350	2329	122 - 358	5016	Asn-1 to Asp-6, Phe-8 to Ser-14.	L0777: 2 and H0615: 1.		
HODFX19	842138	2330	3 - 494	5017	Pro-15 to Gly-24, Cys-36 to Ile-44, Arg-77 to Pro-112.	H0615: 1 and L0775: 1.		
HODFX12	969588	2331	3 - 170	5018	Ser-17 to Gln-29.	H0615: 1 and L0666: 1.		
HODFX04	926278	2332	222 - 491	5019	Ser-2 to Ile-16.	H0615: 1, L0775: 1 and L0748: 1.		
HODFW95	795281	2333	3 - 563	5020	His-1 to Arg-7, Ala-45 to Arg-52, Ser-75 to Leu-80, Arg-89 to Asp-94,	L0747: 2 and H0615: 1.		

HODFW40	859320	2334	386 - 556	5021	Arg-139 to Glu-158.	H0615: 1, L0805: 1 and L0776: 1.		
HODFR85	783789	2335	35 - 199	5022		H0615: 1 and L0756: 1.		
HODFL37	948703	2336	239 - 463	5023	Lys-1 to Thr-22.	H0615: 1		
HODFI11	966065	2337	326 - 460	5024		L0777: 2 and H0615: 1.		
HODFI66	974317	2338	81 - 338	5025		H0615: 1		
HODFI45	974916	2339	453 - 593	5026		H0615: 1		
HODFI82	779191	2340	1 - 150	5027		H0615: 1 and L0362: 1.		
HODFI88	974911	2341	14 - 544	5028	His-8 to Gly-18, Glu-150 to Leu-167.	AR054: 34, AR051: 29, AR050: 23, AR089: 4, AR061: 4 H0615: 1		
HODFE04	926999	2342	85 - 249	5029		H0615: 1 and L0748: 1.		
HODFD73	909812	2343	1 - 576	5030		AR061: 10, AR089: 4 H0615: 1		
HODFC79	774156	2344	66 - 242	5031	Thr-47 to Lys-53.	H0615: 1 and L0749: 1.		
HODEZ45	974337	2345	215 - 436	5032	His-34 to Trp-39.	H0615: 1		
HODEU01	915167	2346	2 - 286	5033		L0748: 3 and H0615: 1.		
HODET07	952194	2347	354 - 127	5034		H0615: 1 and L0748: 1.		
HODES10	963474	2348	90 - 200	5035		L0534: 1 and H0615: 1.		



HODEO35	859364	2349	2 - 136	5036		H0615: 1, L0376: 1 and L0759: 1.		
HODEK82	779245	2350	420 - 596	5037	Leu-1 to Phe-8.	H0615: 1 and L0753: 1.		
HODEA14	859375	2351	3 - 527	5038		H0615: 1, L0060: 1 and L0462: 1.		
HODDX64	745810	2352	73 - 393	5039		H0328: 1 and L0748: 1.		
HODDS89	531075	2353	301 - 453	5040	Thr-1 to Val-7.	H0328: 1 and L0756: 1.		
HODDS74	765863	2354	83 - 235	5041	Arg-21 to Phe-27, Ser-45 to Trp-50.	H0328: 1 and L0748: 1.		
HODDF37	420051	2355	271 - 420	5042		H0328: 1		
	704622	2690	173 - 481	5377	Pro-46 to Tyr-51.			
HODDE02	920961	2356	3 - 200	5043	Asp-1 to Asp-8.	H0328: 1, L0373: 1 and L0777: 1.		
HODCZ64	745966	2357	71 - 208	5044	Pro-35 to Lys-46.	AR051: 30, AR050: 10 H0328: 1		
HODCZ39	875811	2358	3 - 203	5045		H0328: 1, L0748: 1 and L0596: 1.		
HODCY73	764543	2359	214 - 414	5046	Asn-36 to Thr-47.	H0328: 1, L0748: 1 and L0439: 1.		
HODCY32	859543	2360	212 - 352	5047		H0328: 1		
HODCW83	781287	2361	40 - 207	5048		H0328: 1 and L0777: 1.		
HODCV61	868291	2362	187 - 393	5049		H0328: 1		
HODCO15	660502	2363	82 - 219	5050		H0328: 1 and L0748: 1.		
HODCJ84	973286	2364	28 - 354	5051	Ser-51 to Leu-56,	H0328: 1		

						Ser-84 to Leu-90.				
HODCC05	932633	2365	397 - 552	5052		Val-10 to Glu-16.			H0328: 1, L0455: 1 and L0777: 1.	
HODCA90	792611	2366	62 - 313	5053		Asn-44 to Asn-51.			H0328: 1 and L0749: 1.	
HODBZ85	784526	2367	60 - 236	5054					H0328: 1 and L0748: 1.	
HODBX08	960178	2368	344 - 595	5055		Pro-43 to Ser-54.			H0328: 1, L0527: 1 and L0749: 1.	
HODBU72	766284	2369	99 - 266	5056		Pro-33 to Phe-39, Tyr-50 to Ser-56.			L0598: 2 and H0328: 1.	
HODBK84	859558	2370	203 - 460	5057		Gly-1 to Ser-17.			AR051: 91, AR050: 61, AR054: 56 H0328: 1	
HODBF61	742114	2371	1 - 159	5058		Tyr-35 to Ile-42.			H0328: 1	
HODBF40	529387	2372	24 - 215	5059					H0328: 1	
HODBF33	702750	2373	2 - 193	5060		Leu-1 to Gly-12.			L0794: 2, L0750: 2, H0328: 1, L0766: 1, L0803: 1, L0788: 1 and L0755: 1.	
HODBF17	529389	2374	196 - 336	5061					H0328: 1 and L0792: 1.	
HODBD93	792579	2375	126 - 308	5062		His-1 to Gly-6, Cys-9 to Thr-18.			L0731: 2 and H0328: 1.	
HODBD73	764670	2376	104 - 340	5063		Thr-8 to Arg-14, Ser-37 to Glu-42.			H0328: 1 and L0748: 1.	
HODBC42	529635	2377	280 - 486	5064		Ser-8 to Ser-13.			L0731: 3 and H0328: 1.	
HODBA48	721931	2378	18 - 257	5065					L0745: 2, H0328: 1,	

HODAZ21	826693	2379	2 - 205	5066	Glu-1 to Gly-13, Gly-21 to Thr-28, Lys-43 to Asn-61.	L0740: 1 and L0759: 1. H0328: 1		
HODAX45	723449	2380	2 - 103	5067	Pro-1 to Gly-12.	L0748: 2 and H0328: 1.		
HODAV84	592179	2381	43 - 210	5068	Lys-1 to Ser-7.	H0328: 1		
HODAV24	679165	2382	177 - 308	5069		L0748: 3, L0740: 2, H0328: 1, L0766: 1, L0803: 1, L0659: 1, L0665: 1 and L0612: 1.		
HODAK55	745532	2383	2 - 169	5070		AR061: 11, AR089: 9 L0748: 3 and H0328: 1.	9p13-p12	230400, 250250
HODAK05	932639	2384	2 - 133	5071	Arg-15 to Thr-22, Ser-28 to Arg-33.	H0328: 1 and L0596: 1.		
HODAE72	529638	2385	1 - 135	5072		H0328: 1		
HODAE55	529637	2386	1 - 117	5073		H0328: 1		
HODAE48	529639	2387	21 - 101	5074	Asp-1 to Arg-8.	H0328: 1		
HODAE01	921680	2388	92 - 319	5075		H0328: 1 and L0748: 1.		
HODAA92	790588	2389	77 - 253	5076	Pro-1 to Gly-20, Ser-27 to Ser-34.	H0328: 1		
HODAA85	784534	2390	3 - 167	5077		H0328: 1		
HODAA80	529560	2391	2 - 298	5078		H0328: 1		
HODAA69	529563	2392	113 - 238	5079		H0328: 1		
HODAA54	859582	2393	64 - 198	5080	Tyr-15 to Gln-27.	H0328: 1		
HODAA34	529570	2394	93 - 251	5081	Lys-42 to Thr-47.	H0328: 1		
HODAA21	859583	2395	49 - 198	5082		H0328: 1 and L0605:		

HODAA15	523382	2396	84 - 131	5083			1.			
HODAA07	954157	2397	21 - 107	5084			H0328: 1			
HODAA04	927711	2398	58 - 303	5085			H0328: 1			
HOCPU05	928651	2399	114 - 377	5086			L0755: 2, L0758: 2, L0717: 1, L0365: 1 and H0660: 1.			
HOCPH02	917453	2400	139 - 327	5087	Arg-14 to Cys-20, Val-34 to Cys-43, Pro-45 to Ser-52.		L0748: 2, L0756: 2, L0372: 1, L0663: 1, L0665: 1, H0660: 1, L0439: 1 and L0777: 1.			
HOCPF02	917630	2401	49 - 240	5088	Ser-18 to Ser-27.		L0766: 1, H0660: 1 and L0758: 1.			
HOCOV07	951744	2402	108 - 314	5089	Phe-19 to Tyr-34, Ser-41 to Arg-51.		L0766: 3 and H0660: 1.			
HOCMM01	914464	2403	112 - 390	5090	Ser-19 to Tyr-28, Glu-34 to Val-45, Gly-53 to Pro-58, Glu-63 to Gln-82.		L0763: 1, L0776: 1 and H0660: 1.			
HOCMI24	878363	2404	2 - 484	5091	Asp-21 to Leu-45.		H0660: 1 and L0731: 1.			
HOCMC01	914552	2405	432 - 136	5092	Pro-31 to Gly-36, Ser-60 to Leu-65, Gln-69 to Thr-76, Gly-81 to Glu-87.		H0660: 1 and L0749: 1.			
HNOJJ12	969077	2406	1517 - 1771	5093			H0687: 1, L0803: 1 and L0666: 1.			
HNOAD04	926258	2407	464 - 625	5094	Thr-12 to Ser-19, Lys-28 to Ala-39.		L0766: 4, L0439: 4, L0646: 1, H0651: 1,			

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

HLWFB01	915399	2419	56 - 328	5106	Lys-38 to Gly-43.	H0553: 1 and L0794: 1.		
HLWEH10	963548	2420	1 - 204	5107	Gln-1 to Ala-17, Arg-47 to Gln-52.	L0617: 1 and H0553: 1.		
HLWEA90	787632	2421	179 - 331	5108	Lys-1 to Thr-6, Ser-32 to Ser-38.	H0553: 1 and L0747: 1.		
HLWDZ31	917643	2422	2 - 259	5109		H0553: 1 and L0758: 1.	256540, 600281, 600281	
HLWDD01	915378	2423	1 - 216	5110	Trp-5 to Lys-11.	H0553: 1 and L0512: 1.		
HLWDB48	856512	2424	215 - 514	5111	Pro-31 to Gln-38, Ser-58 to Gly-69.	H0553: 1 and L0740: 1.		
HLWCP60	739801	2425	1 - 207	5112	Phe-1 to Gly-6, Phe-40 to Gly-49.	H0553: 1 and L0596: 1.		
HLWCN93	791854	2426	219 - 392	5113	Glu-4 to Ala-9.	H0553: 1 and L0748: 1.		
HLWCN50	723787	2427	2 - 250	5114	Val-33 to Ser-38.	H0553: 1 and L0756: 1.		
HLWCF83	781069	2428	1 - 297	5115	Pro-14 to Arg-26, Pro-28 to Ser-33, Gly-48 to Ala-56.	H0553: 1 and L0752: 1.		
HLWCF33	687995	2429	3 - 503	5116	Leu-62 to Arg-69, Lys-76 to Phe-96.	H0553: 1, L0591: 1 and L0595: 1.		
HLWCE47	720156	2430	278 - 466	5117		H0553: 1, L0783: 1 and L0749: 1.		
HLWCB93	623773	2431	278 - 3	5118	Pro-6 to Glu-18, Pro-20 to Trp-40, Lys-86 to Arg-92.	H0553: 1		

	856519	2691	3 - 200	5378	Ser-15 to Ser-23.	
HLWBX42	917920	2432	44 - 382	5119	Arg-11 to Ser-17.	H0553: 1 and L0751: 1.
HLWBW29	690515	2433	1 - 195	5120	Arg-2 to Gly-7, Ile-28 to Ile-34, Ser-56 to Val-62.	H0553: 1 and L0748: 1.
HLWBT09	887877	2434	3 - 419	5121	Ser-1 to Glu-28.	AR050: 49, AR054: 47, AR051: 27 H0553: 1
HLWBS62	743406	2435	9 - 365	5122	Gly-11 to Trp-16, Cys-53 to Gly-78, Arg-99 to Asp-105, Ser-113 to Glu-119.	H0553: 1, L0766: 1 and L0747: 1.
HLWBR85	784261	2436	221 - 370	5123	Lys-9 to Asn-22.	L0747: 2 and H0553: 1.
HLWBQ91	790072	2437	1 - 303	5124		H0553: 1 and L0748: 1.
HLWBJ65	747784	2438	270 - 467	5125	Leu-20 to Asp-38.	H0553: 1 and L0759: 1.
HLWBH92	791355	2439	95 - 301	5126	Glu-8 to Gln-18.	H0553: 1 and L0754: 1.
HLWBG78	888068	2440	39 - 371	5127	Pro-2 to Thr-7, Ala-13 to Arg-20.	H0553: 1 and L0748: 1.
HLWBF48	721530	2441	172 - 381	5128	Arg-12 to Gly-21.	H0553: 1, L0665: 1, L0439: 1 and L0759: 1.
HLWBE74	887967	2442	2 - 232	5129	Glu-7 to Glu-13, Trp-18 to Thr-32, Pro-34 to Arg-44, Gly-51 to Trp-60, Pro-62 to Ala-72.	AR054: 15, AR050: 3, AR051: 2 H0553: 1

HLWBC21	869611	2443	2 - 412	5130	Pro-2 to Val-21, Asp-23 to Val-30, Gly-36 to Leu-41, Met-49 to Gly-55, Thr-72 to Lys-78, Ile-92 to Asp-97.	L0747: 2, H0553: 1 and L0794: 1.		
HLWBA80	720397	2444	3 - 347	5131	Lys-6 to Leu-12, His-39 to Leu-57, Ile-61 to Asp-66.	H0553: 1 and L0755: 1.		
HLWBA27	931387	2445	2 - 322	5132	Lys-6 to Asn-13, Gly-31 to Gly-36, Glu-91 to Ser-99.	H0553: 1 and L0749: 1.		
HLWAW86	785395	2446	1 - 273	5133	Lys-11 to Arg-23, Cys-25 to Cys-31, Pro-33 to Tyr-38, Arg-46 to Ile-60.	H0553: 1 and L0759: 1.		
	941397	2692	115 - 462	5379	Leu-17 to Gln-23, Gln-38 to Phe-44, Gln-65 to Gln-72, Thr-80 to Tyr-86.			
HLWAS09	625419	2447	74 - 235	5134	His-27 to Ile-34.	H0553: 1		
HLWAR08	959139	2448	3 - 290	5135	Tyr-46 to His-52.	AR089: 4, AR061: 2 L0539: 1 and H0553: 1.		
HLWAO67	751503	2449	35 - 214	5136		H0553: 1 and L0745: 1.		
HLWAL31	948928	2450	124 - 2	5137		AR054: 55, AR050: 51, AR051: 48, AR089: 4, AR061: 2 H0553: 1		



971312	2693	23 - 511	5380	Arg-9 to Pro-15, Leu-114 to Val-120, Cys-147 to Cys-156.				
HLWAJ18	666281	2451	5138			H0553: 1 and L0439: 1.	20q12-q13	600281, 600281
HLWAF02	919714	2452	5139	Arg-1 to Ser-6, Phe-13 to Gln-24, Glu-31 to Arg-40, Ser-48 to Asn-56, Asp-69 to Val-75.		H0553: 1 and L0758: 1.		
HLWAE09	789030	2453	5140	Pro-21 to Gln-27, Glu-53 to Ser-60.		H0553: 1 and L0439: 1.		
HLWAD57	734655	2454	5141	His-1 to Ala-7, Thr-34 to Leu-39.		H0553: 1		
HLWAD33	702317	2455	5142	Arg-1 to Arg-10, Ile-66 to Glu-78.		H0553: 1, L0754: 1 and L0755: 1.		
HLWAD32	699158	2456	5143	Asn-42 to Lys-48.		H0553: 1		
HLWAD02	919725	2457	5144	Arg-2 to Phe-7, Thr-68 to Asn-73.		H0553: 1 and L0663: 1.		
HKZAH11	965175	2458	5145	Gly-11 to Ile-17, Asn-24 to Ser-31, Gln-47 to Ala-64, Pro-66 to Ala-72, Gly-77 to Gly-84.		L0794: 2, L0766: 1, L0665: 1 and H0689: 1.		
HJMBX19	668568	2459	5146	Leu-2 to Arg-11, Ser-25 to Gly-33, Lys-54 to His-64.		L0777: 2, H0545: 1 and L0754: 1.		
HJMBS77	772101	2460	5147	Ser-48 to Lys-57.		H0545: 1 and L0756: 1.		
HJMBS10	964464	2461	5148	Tyr-47 to Ser-58.		H0545: 1 and L0599:		

HJMBQ90	78834	2462	156 - 557	5149	Thr-17 to Gly-22, Gln-69 to Glu-74.	1.	H0545: 1 and L0747: 1.		
HJMBN02	919737	2463	218 - 436	5150	Arg-5 to Thr-16.	1.	H0545: 1 and L0763: 1.		
HJMBI93	929114	2464	47 - 199	5151		1.	H0545: 1 and L0646: 1.		
HJMAV93	828110	2465	373 - 122	5152	Asn-74 to Pro-80.		H0545: 1, L0748: 1 and L0740: 1.		
HJMAU07	961623	2466	187 - 501	5153			H0545: 1 and L0794: 1.	141750, 141800, 141800, 141800, 141800, 141850, 141850, 141850, 141850, 141850, 141850, 156850, 186580, 191092, 600140, 600273, 601313, 601785	
HJMAQ86	785410	2467	1 - 234	5154	Pro-3 to Ser-16, Pro-27 to Gly-32, Pro-49 to Ala-58, Thr-70 to Lys-78.		L0588: 2, H0545: 1 and L0603: 1.		

HJMAQ14	657579	2468	130 - 477	5155			L0163: 2, H0545: 1 and L0754: 1.		
HJMAJ91	811222	2469	78 - 452	5156	Arg-1 to Ser-15, Ser-18 to Ser-33, Glu-42 to Arg-51.		H0545: 1 and L0740: 1.		
HJMAI62	742612	2470	195 - 356	5157	Gly-15 to Glu-21.		H0545: 1		
HETLF29	909762	2471	3 - 416	5158			AR061: 4, AR089: 2 H0046: 1 and L0758: 1.		
HETJY68	752542	2472	109 - 306	5159			H0046: 1, L0439: 1, L0740: 1 and L0591: 1.		
HETID12	655199	2473	13 - 321	5160	Pro-39 to Arg-44, Ala-89 to Glu-103.		H0046: 1 and L0731: 1.		
HETHO01	921649	2474	218 - 415	5161			L0748: 2, H0046: 1 and L0766: 1.		
HETHB18	529467	2475	2 - 247	5162			H0046: 1		
HETFF68	529587	2476	2 - 166	5163	Asn-1 to Leu-13.		H0046: 1		
HETFF43	529589	2477	70 - 204	5164			H0046: 1		
HETDU61	742157	2478	250 - 420	5165	Ala-39 to Cys-46.		H0046: 1, L0748: 1 and L0581: 1.		
HETDA25	677490	2479	181 - 336	5166			H0046: 1 and L0439: 1.		
HETCO27	533536	2480	3 - 113	5167	Val-19 to Leu-35.		H0046: 1		
HETCH01	961038	2481	2 - 352	5168	Cys-11 to Pro-19, Asn-28 to Leu-35.		L0738: 1, H0046: 1, L0527: 1 and L0599: 1.		
HETBM55	929285	2482	113 - 343	5169	Val-20 to Gly-26, Asn-62 to Arg-68.		L0747: 2 and H0046: 1.	1q12-1q21.2	104770, 107670, 110700, 145001,

									146760, 146790, 159001, 191315, 600897, 601412, 601652, 601863, 602491
HETBE61	965638	2483	124 - 447	5170	Glu-31 to Gly-37, Leu-42 to Gln-49.	H0046: 1 and L0731: 1.	6q25		180020, 600320, 600883
HETAS91	790499	2484	237 - 548	5171	Ser-73 to Lys-91.	L0740: 3 and H0046: 1.			
HETAS81	778539	2485	12 - 188	5172	Pro-17 to Ser-23.	H0046: 1 and L0777: 1.			
HETAS62	754155	2486	14 - 187	5173	Ser-22 to Lys-31, Thr-39 to Glu-47.	H0046: 1 and L0748: 1.			
HETAJ14	660831	2487	575 - 757	5174	Ala-24 to Ser-31, Val-52 to Asp-61.	L0747: 2, H0046: 1 and L0748: 1.			
HEQCC01	924849	2488	375 - 659	5175	Ser-54 to Ala-59, Ser-64 to Phe-69, Arg-79 to Thr-87.	H0544: 1, L0775: 1, L0776: 1 and L0758: 1.			
HEQBT78	773528	2489	252 - 10	5176		H0544: 1 and L0731: 1.			
HEQBP18	855578	2490	463 - 245	5177	Thr-7 to Gly-14.	H0544: 1			
HEQB109	739877	2491	29 - 142	5178		H0544: 1			
HEQBG85	827915	2492	1 - 276	5179		H0544: 1	2pter-p25.1		
HEQBG60	427813	2493	2 - 295	5180	Ser-1 to Pro-23, Pro-35 to Asn-45,	H0544: 1	17p13.3	113721, 247200,	

						Cys-53 to Arg-70.				60059, 601545
HEQBE78	772860	2494	101 - 265	5181		Asp-13 to Lys-20, Thr-43 to Ala-49.		H0544: 1		
HEQBE71	760305	2495	101 - 451	5182		Glu-18 to Pro-27, Asp-58 to Asn-65.		H0544: 1		
HEQAZ01	916321	2496	97 - 402	5183		Phe-2 to Gly-7.		H0544: 1 and L0599: 1.		
HEQAM59	739220	2497	50 - 160	5184				H0544: 1 and L0752: 1.		
HEQAK94	793250	2498	2 - 298	5185				H0544: 1, L0439: 1 and L0754: 1.		
HEQAF54	729594	2499	3 - 200	5186				L0439: 2 and H0544: 1.		
HEQAD73	914044	2500	82 - 555	5187		Trp-1 to Ser-10.		L0731: 5 and H0544: 1.		
HEQAA93	792255	2501	340 - 519	5188		Lys-6 to Arg-11, Thr-22 to Gly-34.		L0747: 3 and H0544: 1.		
HEPCB04	941270	2502	72 - 305	5189		Ser-1 to Gln-9, Ser-16 to Cys-22, Ser-33 to Ser-38, Ser-58 to Trp-66.		L0777: 4, H0150: 1 and L0757: 1.		
HEPBO92	952996	2503	146 - 349	5190		Arg-10 to Ser-18, Leu-37 to Arg-48.		H0150: 1 and L0747: 1.		
HEPBO85	783362	2504	1 - 240	5191				L0754: 2 and H0150: 1.		
HEPAY26	825778	2505	29 - 193	5192				H0150: 1 and L0743: 1.		
HEPAX40	535627	2506	2 - 172	5193				L0744: 2, L0731: 2 and		

HEPAX16	667665	2507	1 - 330	5194	H0150: 1. L0766: 3, L0776: 2, H0150: 1, L0371: 1, L0761: 1, L0764: 1, L0662: 1, L0655: 1, L0748: 1, L0754: 1, L0749: 1 and L0779: 1.	11p15.5	125852, 126452, 126452, 141900, 141900, 141900, 141900, 141900, 141900, 141900, 141900, 142000, 142000, 142200, 142250, 142270, 176730, 176730, 176730, 190020, 191290, 192500, 192500, 194071, 194071, 204500, 600856, 601680, 602631, 602631
HEPAQ35	707533	2508	245 - 511	5195	L0748: 2, L0756: 2,		

							L0777: 2, H0150: 1, L0789: 1, L0666: 1 and L0758: 1.			
HEPAP34	703336	2509	369 - 623	5196		Pro-17 to Val-26, His-34 to Lys-41, Pro-54 to Phe-66.	H0150: 1 and L0777: 1.			
HEPAN05	932893	2510	223 - 489	5197		Lys-15 to Leu-29, Lys-45 to Glu-55, Lys-82 to Lys-89.	H0150: 1 and L0780: 1.			
HEPAK04	933039	2511	4 - 177	5198		Leu-42 to Gly-54.	H0150: 1 and L0763: 1.			
HEPAJ14	657440	2512	55 - 243	5199		His-1 to Ser-10, Pro-22 to Gly-38, Asn-55 to Ser-60.	H0150: 1 and L0743: 1.			
HEPAJ04	933091	2513	71 - 367	5200		Thr-1 to Arg-16, Ala-45 to Gln-50, Pro-63 to Ala-68, Ala-80 to Asp-93.	H0150: 1, L0779: 1 and L0758: 1.			
HEPAE58	509130	2514	174 - 353	5201		Gly-38 to Asp-56.	H0150: 1 and L0743: 1.			
HEPAE02	921389	2515	3 - 107	5202		Leu-15 to Lys-24.	H0150: 1 and L0522: 1.			
HEGBC03	922550	2516	2 - 304	5203			H0550: 1 and L0646: 1.			
HEGBB67	751233	2517	95 - 352	5204		Val-6 to Glu-11, Phe-22 to Cys-29.	H0550: 1 and L0745: 1.			
HEGBA01	915596	2518	217 - 372	5205			H0550: 1 and L0605: 1.			
HEGAX04	927260	2519	3 - 230	5206		Lys-18 to Glu-23, Gln-60 to Ala-67.	H0550: 1 and L0766: 1.			

HEGAQ91	789940	2520	1 - 273	5207			H0550: 1, L0748: 1 and L0749: 1.	Xq22.3	300067, 300067, 300121, 300121, 301201, 301835, 311850
HEGAL55	731654	2521	153 - 359	5208	Lys-5 to Gly-11.		H0550: 1, L0745: 1 and L0731: 1.		
HEGAJ08	959216	2522	344 - 511	5209	Pro-7 to Val-13.		L0731: 2, L0597: 2, H0550: 1, L0783: 1 and L0439: 1.		
HEGAC02	918992	2523	2 - 196	5210	Ser-7 to Cys-21, Ile-59 to Gly-64.		H0550: 1 and L0758: 1.		
HEEAY84	782706	2524	222 - 383	5211	Asn-1 to Lys-14.		H0549: 1 and L0748: 1.		
HEEAX09	912065	2525	2 - 328	5212	Arg-65 to Arg-72.		AR051: 4, AR050: 2, AR054: 2 H0549: 1		
HEEAW40	710655	2526	222 - 398	5213	Asn-45 to Thr-50, Pro-52 to Arg-57.		H0549: 1, L0589: 1 and L0366: 1.	6q25.2-q27	152200, 167000, 180020, 600320, 600883, 602544
HBEAP59	738892	2527	249 - 413	5214	Leu-32 to Leu-38.		H0549: 1 and L0594: 1.		
HEEAM25	677599	2528	101 - 784	5215			L0794: 6, L0806: 2, L0752: 2, H0549: 1, L0796: 1, L0766: 1,		



								L0380: 1, L0803: 1, L0804: 1, L0807: 1, L0789: 1, L0663: 1, L0755: 1, L0596: 1 and L0485: 1.			
HEEAH94	794257	2529	114 - 344	5216				H0549: 1 and L0599: 1.			
HEEAH76	769950	2530	16 - 213	5217			Val-21 to Gly-26, Leu-29 to Gly-38.	H0549: 1 and L0748: 1.			
HEEAH57	734488	2531	219 - 404	5218			Pro-3 to Phe-9, Ser-17 to Ala-24, Val-52 to Lys-62.	H0549: 1 and L0601: 1.			
HEEAH16	661827	2532	15 - 344	5219			Ser-45 to Ser-50, Tyr-103 to Phe-110.	H0549: 1 and L0747: 1.			
HEEAG51	930810	2533	1 - 423	5220			Glu-61 to Val-77, Phe-81 to Ser-88.	H0549: 1 and L0605: 1.			
HEEAG12	724929	2534	266 - 36	5221			Thr-29 to Pro-49, Asp-65 to Glu-77.	AR050: 66, AR054: 64, AR051: 63, AR089: 13, AR061: 3 H0549: 1			
	887048	2694	429 - 295	5381							
HEEAD13	470886	2535	1 - 195	5222				H0549: 1 and L0756: 1.			
HEEAB40	710668	2536	128 - 310	5223			Val-15 to Ala-23, Pro-30 to Ser-35.	H0549: 1 and L0748: 1.			
HEAAX26	684734	2537	63 - 182	5224			Val-22 to Gly-29.	H0369: 1 and L0740: 1.			
HEAAU20	911255	2538	53 - 364	5225			Lys-80 to Lys-86.	H0369: 1 and L0745: 1.	6q21	120110, 121014, 601666,	

HEAAR47	973284	2539	20 - 220	5226					602772
HEAAR21	883939	2540	353 - 535	5227	Gly-1 to Ser-6.		H0369: 1		
HEAAN43	842032	2541	235 - 336	5228			H0369: 1 and L0748: 1.		
HEAAM71	950736	2542	321 - 563	5229	Thr-3 to Ala-10, Glu-30 to Arg-38.		L0539: 1, H0369: 1 and L0748: 1.		
HEAAL76	770200	2543	2 - 136	5230	Leu-23 to His-28.		H0369: 1 and L0589: 1.		
HEAAG84	896892	2544	605 - 396	5231			H0369: 1		
	904209	2695	1539 - 1913	5382	Arg-43 to Ser-49, Glu-55 to Ser-61, Pro-70 to Arg-75, Cys-91 to Gly-103.				
	906483	2696	316 - 504	5383	Arg-45 to Gly-52.				
HEAAG42	714041	2545	598 - 792	5232	Glu-24 to Tyr-31.		L0731: 9, L0754: 3 and H0369: 1.		
HEAAB66	844361	2546	438 - 740	5233			H0369: 1		
HCORB05	928679	2547	2 - 142	5234	Pro-1 to Arg-14.		L0626: 1, L0775: 1, L0776: 1 and H0670: 1.		
HCOPM06	933473	2548	158 - 628	5235	Pro-15 to Glu-21, Ala-43 to Glu-58, Leu-96 to Glu-101, Ala-111 to Ala-119.		L0769: 1, L0665: 1 and H0670: 1.		
HCOPi07	951645	2549	185 - 313	5236	Thr-29 to Arg-43.		H0670: 1 and L0758: 1.		
HCOPF07	951655	2550	79 - 240	5237			L0779: 3, L0758: 3 and H0670: 1.		

HCOOF07	951693	2551	221 - 493	5238	Pro-13 to Ser-19, Asp-27 to Thr-35, Asn-7 to Val-13.	H0670: 1, L0731: 1 and L0759: 1.		
HCONP02	917577	2552	148 - 306	5239	Asn-7 to Val-13.	L0517: 1, L0438: 1, H0670: 1 and L0439: 1.		
HCONM33	971637	2553	474 - 217	5240	Asp-5 to Ala-11, Trp-24 to Phe-31, Arg-44 to Trp-50.	L0517: 2, L0756: 2, L0803: 1, L0776: 1, L0809: 1, L0663: 1, H0670: 1, L0755: 1 and L0759: 1.		
HCOMM05	925952	2554	1 - 840	5241	Gln-19 to Asp-38, Pro-46 to Thr-55, Leu-96 to Gly-104, Ala-114 to Ala-119, Gln-125 to Trp-131, Pro-133 to Pro-141, Phe-144 to Glu-150, Glu-180 to Val-185, Glu-192 to Glu-197, Glu-254 to Leu-262, Met-272 to Ser-280.	AR089: 1, AR061: 1 H0670: 1		
HCHQA48	908495	2555	13 - 357	5242	Cys-6 to Lys-21, Ser-53 to Ile-65, Asn-68 to Gln-80, Arg-106 to Ala-114.	H0484: 1 and L0743: 1.		
HCHOX63	957690	2556	1 - 741	5243	Arg-1 to Lys-12, Gly-57 to Gly-62, Pro-74 to Asp-80.	H0484: 1, L0617: 1, L0772: 1, L0751: 1 and L0752: 1.		
HCHNW48	862478	2557	122 - 325	5244	Lys-1 to Ser-13.	AR061: 1, AR089: 1 H0484: 1 and L0589: 1.		

HCHMX82	850340	2558	2 - 349	5245			H0484: 1 and L0749: 1.		
HCHMW18	966985	2559	97 - 408	5246	Leu-8 to Val-20, Arg-25 to Arg-35, Ala-38 to Trp-46, Phe-69 to Tyr-75, Ser-96 to Trp-104.		L0757: 2 and H0484: 1.		
HCHMJ89	786765	2560	3 - 218	5247	Ala-1 to Gly-8, Arg-16 to Ser-21, Ser-35 to Pro-45, Ala-61 to Gly-67.		H0484: 1 and L0439: 1.		
HCHMI96	800129	2561	3 - 248	5248			AR051: 32, AR054: 29, AR050: 28 H0484: 1		
HCHMI15	935298	2562	52 - 591	5249	Lys-67 to Ser-79, Ser-89 to Thr-109, Asn-116 to Ser-129, Glu-140 to Lys-147, Ser-161 to Lys-172.		H0484: 1 and L0792: 1.		
HCHCI07	952957	2563	248 - 499	5250	Gly-1 to Trp-6, Gly-74 to Trp-80.		L0749: 3 and H0483: 1.		
HCHCH68	869084	2564	251 - 502	5251			H0483: 1 and L0764: 1.		
HCHCG28	686431	2565	214 - 462	5252	Phe-32 to Ala-37.		L0748: 3, L0596: 2, H0483: 1, L0439: 1 and L0749: 1.		
HCHCE78	773428	2566	11 - 193	5253			H0483: 1		
HCHBQ27	682308	2567	11 - 241	5254	Gly-4 to Lys-10, Gln-36 to Glu-41, Arg-61 to Arg-76.		H0483: 1		

HCHBN09	625420	2568	1 - 177	5255	Gly-1 to Ser-13.	H0483: 1	19q13.2	107741, 113900, 122720, 122720, 126340, 126391, 160900, 164731, 173850, 207750, 248600, 258501
HCHBM26	681404	2569	13 - 153	5256	Gly-4 to Lys-10, Gln-36 to Glu-41.	H0483: 1		
HCHAI62	743411	2570	2 - 148	5257	Lys-1 to Lys-21.	H0483: 1		
HCHAH04	487985	2571	1 - 75	5258		H0483: 1		
HCHAG52	726081	2572	3 - 212	5259	Ser-26 to Thr-44.	H0483: 1		
HCDMF96	796196	2573	86 - 286	5260	Gly-12 to Cys-27.	L0752: 1 and S0398: 1.		
HCDME32	863374	2574	147 - 473	5261	Glu-8 to Met-22, Pro-104 to Pro-109.	L0777: 1, L0758: 1, L0697: 1 and S0398: 1.		
HCDMC86	785134	2575	160 - 330	5262	Glu-12 to Leu-20.	S0398: 1		
HCDMC25	677627	2576	47 - 283	5263	Gln-9 to Val-17, Phe-38 to Glu-45.	L0439: 1 and S0398: 1.		
HCDMC23	675490	2577	116 - 271	5264		S0398: 1		
HCDMC22	672815	2578	2 - 241	5265		S0398: 1		
HCDMC06	934663	2579	28 - 183	5266		S0398: 1		
HCDMB91	789551	2580	185 - 289	5267		S0398: 1		
HCDMB42	713300	2581	128 - 244	5268	Gly-12 to His-19.	S0398: 1		
HCDMB41	711996	2582	2 - 202	5269	Gly-13 to Asn-22.	L0587: 1 and S0398: 1.		

HCDMB27	682389	2583	23 - 148	5270			S0398: 1		
HCDMB12	968918	2584	418 - 627	5271	Pro-7 to Gly-24.		AR050: 93, AR054: 62, AR051: 57 S0398: 1		
HCDMB08	958542	2585	115 - 267	5272	Gly-38 to Gly-51.		L0753: 1 and S0398: 1.		
HCDMB03	923316	2586	88 - 252	5273	Cys-20 to His-27, Glu-35 to Lys-54.		S0398: 1		
HCDMA20	669201	2587	3 - 92	5274			L0438: 1, L0439: 1 and S0398: 1.		
HCBND03	922388	2588	3 - 401	5275	Pro-12 to Thr-21, Gly-35 to Thr-41, Thr-53 to Gln-75, Ser-92 to Gly-98.		H0661: 1, L0805: 1 and L0776: 1.		
HCBMZ07	951788	2589	230 - 358	5276			H0661: 1 and L0740: 1.		
HCBMY10	961718	2590	371 - 138	5277	Glu-22 to Glu-49.		H0661: 1 and L0603: 1.		
HCBMG11	965394	2591	207 - 653	5278	Ala-1 to Asn-9, Thr-24 to Asn-29, Gly-43 to Arg-53, Arg-106 to Arg-111.		H0661: 1, L0664: 1, L0754: 1 and L0749: 1.		
HBZSK04	926407	2592	2 - 79	5279	Gln-7 to Lys-14.		S0190: 1		
HBZSG02	920249	2593	40 - 291	5280			L0771: 2 and S0190: 1.		
HBZSD32	699335	2594	59 - 427	5281	Val-8 to Leu-14, Pro-22 to Arg-31, Thr-62 to Lys-68, Arg-76 to Cys-82, Trp-85 to His-91.		S0190: 1		
HBZAJ73	764479	2595	2 - 244	5282			L0741: 3 and S0188: 1.		

HBZAI26	681879	2596	198 - 443	5283	Gly-38 to Ser-44.	S0188: 1 and L0747: 1.		
HBZAI39	847621	2597	545 - 808	5284		S0188: 1 and L0605: 1.		
HBZAI14	847620	2598	3 - 203	5285		S0188: 1		
HBZAB15	660348	2599	240 - 362	5286	Lys-26 to His-31.	S0188: 1 and L0587: 1.		
HBZAB08	959560	2600	160 - 414	5287	Pro-1 to Gln-15, Gln-38 to Asn-45, Pro-57 to Thr-65.	L0774: 3, L0775: 1, L0809: 1, S0188: 1 and L0758: 1.		
HBNBQ50	887096	2601	222 - 473	5288	Arg-54 to Arg-60.	H0188: 1 and L0751: 1.		
HBNBO30	430360	2602	3 - 155	5289	Glu-17 to Tyr-22.	L0774: 2, L0741: 2, L0439: 2, L0411: 1 and H0188: 1.		
HBNBL29	703113	2603	245 - 409	5290		H0188: 1, L0663: 1 and L0748: 1.		
HBNBI29	907015	2604	63 - 215	5291	Trp-18 to Gly-23, Ser-25 to Met-31.	H0188: 1 and L0526: 1.		
HBNBI06	960664	2605	2 - 298	5292		H0188: 1, L0769: 1 and L0753: 1.		
HBNBB41	712676	2606	50 - 256	5293		H0188: 1 and L0748: 1.		
HBNBB27	600905	2607	143 - 3	5294		H0188: 1		
	847732	2697	1 - 186	5384				
HBNBB09	868924	2608	372 - 79	5295		L0439: 3 and H0188: 1.		
HBNAW73	764716	2609	87 - 236	5296		H0188: 1 and L0748: 1.		
HBNAC74	586797	2610	3 - 152	5297	Asp-30 to Trp-36, Ser-39 to Trp-44.	H0188: 1		
HBNAC71	525831	2611	1 - 318	5298	Arg-10 to Glu-32.	H0188: 1		

HBNA48	721983	2612	150 - 308	5299		H0188: 1		
HBNA42	714263	2613	1 - 120	5300		H0188: 1 and L0591: 1.		
HBNA32	526549	2614	1 - 111	5301		H0188: 1		
HBNA28	525832	2615	34 - 183	5302		H0188: 1		
HBNA25	525834	2616	3 - 146	5303	Leu-2 to Gln-11, Lys-35 to Lys-48.	H0188: 1		
HBNA09	525833	2617	8 - 76	5304		H0188: 1		
HBNA02	921187	2618	2 - 199	5305	Pro-24 to Ala-37.	H0188: 1		
HBGT76	903653	2619	14 - 556	5306	His-8 to Gly-18, Pro-89 to Gly-96, Lys-126 to Trp-131, Glu-133 to Gly-141.	AR050: 173, AR051: 169, AR054: 143, AR089: 46, AR061: 9 H0617: 1		
HBGTE11	965121	2620	71 - 325	5307	Gly-14 to Val-21.	H0617: 1, L0766: 1 and L0788: 1.		
HBGQS88	886650	2621	2 - 448	5308	Pro-16 to Gly-38, Arg-50 to Arg-58, Asp-65 to Asn-81.	AR054: 7, AR051: 2, AR050: 1 H0617: 1, L0769: 1, L0637: 1 and L0789: 1.		
HBGNL85	848179	2622	1 - 570	5309	Thr-10 to Gly-16.	H0617: 1, L0767: 1, L0775: 1 and L0779: 1.		
HBGND04	926973	2623	55 - 354	5310	Ser-73 to Lys-78, Pro-93 to Gly-100.	L0779: 2, L0752: 2, H0617: 1 and L0794: 1.		
HBGMT82	954374	2624	28 - 507	5311		H0617: 1, L0774: 1, L0747: 1 and L0752: 1.		
HBGMS69	754392	2625	3 - 272	5312	Pro-46 to Gly-55, Arg-79 to Cys-89.	H0617: 1 and L0750: 1.		
HBGMO78	773043	2626	104 - 307	5313	Ser-28 to Trp-36.	L0758: 2 and H0617: 1.		



HBGMG81	880276	2627	37 - 363	5314	Lys-3 to Leu-13, Pro-70 to Ser-78.	AR050: 297, AR051: 237, AR054: 211 H0617: 1		
HBGFS88	914032	2628	358 - 140	5315		L0748: 2, H0606: 1 and L0593: 1.		
HBGFG53	727748	2629	267 - 473	5316	Gly-18 to Gly-24, Gly-31 to Ser-38, His-57 to Asn-62.	H0606: 1 and L0777: 1.		
HBGDH33	702854	2630	3 - 374	5317		L0439: 6, L0776: 2, L0777: 2, H0181: 1, L0762: 1 and L0809: 1.		
HBGDF39	861602	2631	2 - 355	5318	Leu-92 to Phe-98.	AR089: 0, AR061: 0 H0181: 1		
HBGDA74	832888	2632	2 - 277	5319		AR089: 33, AR061: 29 H0181: 1	102200, 106100, 131100, 131100, 131100, 133780, 147050, 153700, 161015, 164009, 168461, 168461, 168461, 180721, 180840, 191181, 193235,	

									209901, 232600, 259700, 259770, 600045, 600319, 600528, 601884
HGBG69	802090	2633	1 - 57	5320	Lys-8 to Ala-14.	H0181: 1			
HGBG67	588263	2634	2 - 157	5321		H0181: 1			
HGBG52	522424	2635	120 - 257	5322	Leu-8 to Gly-19, Leu-31 to Cys-36.	H0181: 1			
HGBG38	525837	2636	1 - 150	5323	Ser-1 to Glu-10.	H0181: 1			
HGBE12	971466	2637	1 - 69	5324		H0181: 1			
HGBB78	773930	2638	1 - 342	5325	Ser-11 to Trp-17, Pro-19 to Thr-28.	H0181: 1 and L0741: 1.			
HBCPV80	932817	2639	2 - 403	5326	Arg-1 to Arg-8, Glu-29 to Arg-37.	AR061: 1, AR089: 1 H0663: 1 and L0783: 1.			
HBCPO75	927520	2640	135 - 356	5327	Ala-26 to Val-32.	L0779: 3, H0663: 1, L0757: 1 and L0758: 1.			
HBCPK03	922493	2641	194 - 514	5328	Lys-25 to Asn-34, Thr-92 to Gly-98.	H0663: 1 and L0766: 1.			
HBCJP02	917981	2642	349 - 507	5329	Glu-14 to Ala-30, Ile-46 to Lys-53.	H0664: 1 and L0758: 1.			
HBCJG07	951898	2643	3 - 137	5330	Arg-5 to Ser-15.	L0754: 2, H0664: 1 and L0748: 1.			
HAUCC58	764851	2644	31 - 402	5331	Cys-1 to Arg-15, Lys-28 to Asp-36,	H0294: 1 and L0777: 1.			

						Thr-64 to Leu-74, Cys-99 to Arg-107, Lys-117 to Arg-124.				
HAUAW51	577959	2645	119 - 349	5332		Ser-24 to Trp-30, Glu-38 to Arg-50.		H0294: 1 and L0748: 1.		
HAUAS89	518847	2646	25 - 132	5333				H0294: 1		
HAUAQ28	685374	2647	320 - 427	5334				H0294: 1 and L0608: 1.		
HAQCF25	678235	2648	1 - 303	5335				L0794: 2, L0599: 2, H0295: 1, L0763: 1, L0800: 1 and L0515: 1.		
HAQCD07	958959	2649	198 - 425	5336		Arg-25 to Ser-50.		H0295: 1 and L0780: 1.		
HACMR08	955638	2650	2 - 280	5337		Leu-30 to Lys-38, Trp-49 to Ala-58, Gly-75 to Pro-80.		L0809: 2, H0685: 1, L0776: 1 and L0780: 1.		

[066] The first column in Table 1A provides a unique "Clone ID NO:Z" for a cDNA clone related to each contig sequence disclosed in Table 1A. This clone ID references the cDNA clone which contains at least the 5' most sequence of the assembled contig and at least a portion of SEQ ID NO:X was determined by directly sequencing the referenced clone. The reference clone may have more sequence than described in the sequence listing or the clone may have less. In the vast majority of cases, however, the clone is believed to encode a full-length polypeptide. In the case where a clone is not full-length, a full-length cDNA can be obtained by methods known in the art and/or as described elsewhere herein.

[067] The second column in Table 1A provides a unique "Contig ID" identification for each contig sequence. The third column provides the "SEQ ID NO:X" identifier for each of the reproductive system associated contig polynucleotide sequences disclosed in Table 1A. The fourth column, "ORF (From-To)", provides the location (i.e., nucleotide position numbers) within the polynucleotide sequence "SEQ ID NO:X" that delineate the preferred open reading frame (ORF) shown in the sequence listing and referenced in Table 1A, column 5, as SEQ ID NO:Y. Where the nucleotide position number "To" is lower than the nucleotide position number "From", the preferred ORF is the reverse complement of the referenced polynucleotide sequence.

[068] The fifth column in Table 1A provides the corresponding SEQ ID NO:Y for the polypeptide sequence encoded by the preferred ORF delineated in column 4. In one embodiment, the invention provides an amino acid sequence comprising, or alternatively consisting of, a polypeptide encoded by the portion of SEQ ID NO:X delineated by "ORF (From-To)". Also provided are polynucleotides encoding such amino acid sequences and the complementary strand thereto.

[069] Column 6 in Table 1A lists residues comprising epitopes contained in the polypeptides encoded by the preferred ORF (SEQ ID NO:Y), as predicted using the algorithm of Jameson and Wolf, (1988) Comp. Appl. Biosci. 4:181-186. The Jameson-Wolf antigenic analysis was performed using the computer program PROTEAN (Version 3.11 for the Power MacIntosh, DNASTAR, Inc., 1228 South Park Street Madison, WI). In some embodiments, polypeptides of the invention comprise, or alternatively consist of, at least one, two, three, four, five or more of the predicted epitopes as described in Table 1A. It will be appreciated that depending on

the analytical criteria used to predict antigenic determinants, the exact address of the determinant may vary slightly.

[070] Column 7 in Table 1A provides an expression profile and library code: count for each of the contig sequences (SEQ ID NO:X) disclosed in Table 1A, which can routinely be combined with the information provided in Table 4 and used to determine the normal or diseased tissues, cells, and/or cell line libraries which predominantly express the polynucleotides of the invention. The first number in column 7 (preceding the colon), represents the tissue/cell source identifier code corresponding to the code and description provided in Table 4. For those identifier codes in which the first two letters are not "AR", the second number in column 7 (following the colon) represents the number of times a sequence corresponding to the reference polynucleotide sequence was identified in the tissue/cell source. Those tissue/cell source identifier codes in which the first two letters are "AR" designate information generated using DNA array technology. Utilizing this technology, cDNAs were amplified by PCR and then transferred, in duplicate, onto the array. Gene expression was assayed through hybridization of first strand cDNA probes to the DNA array. cDNA probes were generated from total RNA extracted from a variety of different tissues and cell lines. Probe synthesis was performed in the presence of <sup>33</sup>P dCTP, using oligo(dT) to prime reverse transcription. After hybridization, high stringency washing conditions were employed to remove non-specific hybrids from the array. The remaining signal, emanating from each gene target, was measured using a Phosphorimager. Gene expression was reported as Phosphor Stimulating Luminescence (PSL) which reflects the level of phosphor signal generated from the probe hybridized to each of the gene targets represented on the array. A local background signal subtraction was performed before the total signal generated from each array was used to normalize gene expression between the different hybridizations. The value presented after "[array code]:" represents the mean of the duplicate values, following background subtraction and probe normalization. One of skill in the art could routinely use this information to identify normal and/or diseased tissue(s) which show a predominant expression pattern of the corresponding polynucleotide of the invention or to identify polynucleotides which show predominant and/or specific tissue and/or cell expression. The sequences disclosed herein have been determined to be predominantly expressed in reproductive

system tissues, including normal and diseased reproductive system tissues (See Table 1A, column 7 and Table 4).

[071] Column 8 in Table 1A provides a chromosomal map location for certain polynucleotides of the invention. Chromosomal location was determined by finding exact matches to EST and cDNA sequences contained in the NCBI (National Center for Biotechnology Information) UniGene database. Each sequence in the UniGene database is assigned to a "cluster"; all of the ESTs, cDNAs, and STSs in a cluster are believed to be derived from a single gene. Chromosomal mapping data is often available for one or more sequence(s) in a UniGene cluster; this data (if consistent) is then applied to the cluster as a whole. Thus, it is possible to infer the chromosomal location of a new polynucleotide sequence by determining its identity with a mapped UniGene cluster.

[072] A modified version of the computer program BLASTN (Altshul et al., J. Mol. Biol. 215:403-410 (1990), and Gish et al., Nat. Genet. 3:266-272 (1993)) was used to search the UniGene database for EST or cDNA sequences that contain exact or near-exact matches to a polynucleotide sequence of the invention (the 'Query'). A sequence from the UniGene database (the 'Subject') was said to be an exact match if it contained a segment of 50 nucleotides in length such that 48 of those nucleotides were in the same order as found in the Query sequence. If all of the matches that met this criteria were in the same UniGene cluster, and mapping data was available for this cluster, it is indicated in Table 1A under the heading "Cytologic Band". Where a cluster had been further localized to a distinct cytologic band, that band is disclosed; where no banding information was available, but the gene had been localized to a single chromosome, the chromosome is disclosed.

[073] Once a presumptive chromosomal location was determined for a polynucleotide of the invention, an associated disease locus was identified by comparison with a database of diseases which have been experimentally associated with genetic loci. The database used was the Morbid Map, derived from OMIM™ (*supra*). If the putative chromosomal location of a polynucleotide of the invention (Query sequence) was associated with a disease in the Morbid Map database, an OMIM reference identification number was noted in column 9, Table 1A, labeled "OMIM Disease Reference(s)". Table 5 is a key to the OMIM reference identification

numbers (column 1), and provides a description of the associated disease in Column 2.

**TABLE 1B**

Clone ID NO:Z	SEQ ID NO:X	CONTIG ID:	BAC ID: A	SEQ ID NO:B	EXON From-To
HAOSH55	14	952380	AL353194	5385	1-964 1250-1399 2650-2905 3588-3668 3971-4987 5854-5963 7336-7775 7870-8256 8419-8895 9000-9339
HAOSH55	14	952380	AL353194	5386	1-90
HAQAK73	15	764671	AC023906	5387	1-739
HAQAK73	15	764671	AC023906	5388	1-845
HAQBS37	20	847519	AP002519	5389	1-168 683-777 1538-3043 3578-4180 5564-5793 6266-6409 6412-6738 7035-7451
HAUBD69	21	529711	AL359674	5390	1-138
HAUBD69	21	529711	AL359674	5391	1-380
HAUBU10	22	968339	AC027538	5392	1-463
HAUBU10	22	968339	AC010770	5393	1-463
HAUBU10	22	968339	AC027538	5394	1-288
HAUBU10	22	968339	AC010770	5395	1-288
HBCQS93	27	930682	AL109945	5396	1-310 1220-1839
HBCQS93	27	930682	AC022307	5397	1-310 1220-1839 2206-2683 2691-2788 3337-3381
HBCQS93	27	930682	AL109945	5398	1-131
HBGBF56	29	957870	AL031963	5399	1-249
HBGBF56	29	957870	AL133351	5400	1-249
HBGBF56	29	957870	AL031963	5401	1-249
HBGBF56	29	957870	AL031963	5402	1-429
HBGBF56	29	957870	AL133351	5403	1-580 1364-1792 2134-2229 3072-3565



					3973-4080
HBGBF56	29	957870	AL031963	5404	1-349
HBGBF56	29	957870	AL133351	5405	1-349
HBGBF56	29	957870	AL031963	5406	1-349
HBGBG42	30	922396	AL096773	5407	1-518 1341-1514 3365-3956 4169-4282 4430-4892 6254-7763
HBGBG42	30	922396	AL096773	5408	1-114
HBGBG42	30	922396	AL096773	5409	1-3033
HBGBH43	31	524532	AP000757	5410	1-726
HBGBH43	31	524532	AP000683	5411	1-726
HBGBH43	31	524532	AP000757	5412	1-249 299-451 651-926
HBGBH43	31	524532	AP000683	5413	1-249 299-452 651-926
HBGBS07	32	954299	AL358472	5414	1-93 229-341 458-525 639-725 820-2416 3085-3172 3955-5506 5626-6422
HBGBS07	32	954299	AL358472	5415	1-391
HBGBS07	32	954299	AL358472	5416	1-344 399-469
HBGBW60	34	954916	AC007779	5417	1-542 1709-1905 3246-3805
HBGBW60	34	954916	AC015667	5418	1-542 1705-1901 3242-3801
HBGBW60	34	954916	AC007936	5419	1-545 1736-1917 3269-3833 6267-6287
HBGBW72	35	524956	AL139376	5420	1-448
HBGBW72	35	524956	AL139376	5421	1-526
HBGDE85	37	524875	AC020850	5422	1-912 1276-1413
HBGDE85	37	524875	AC008693	5423	1-138
HBGDE85	37	524875	AC023611	5424	1-105

HBGDE85	37	524875	AC022123	5425	1-957 1332-1469
HBGDE85	37	524875	AC010845	5426	1-138
HBGDT43	39	974223	L81574	5427	1-168
HBGDT43	39	974223	AC022276	5428	1-166
HBGDT43	39	974223	AC023653	5429	1-57
HBGDT43	39	974223	AC012102	5430	1-140
HBGDT43	39	974223	AC048382	5431	1-115
HBGDT43	39	974223	AC011036	5432	1-193
HBGDT43	39	974223	AC068682	5433	1-153
HBGDT43	39	974223	AL356496	5434	1-35
HBGDT43	39	974223	AC006087	5435	1-129
HBGDT43	39	974223	AC016142	5436	1-150
HBGDT43	39	974223	AC027456	5437	1-98
HBGDT43	39	974223	AC016797	5438	1-116
HBGDT43	39	974223	AL356606	5439	1-87
HBGDT43	39	974223	AC025181	5440	1-159
HBGDT43	39	974223	AC055788	5441	1-170
HBGDT43	39	974223	AC027264	5442	1-147
HBGDT43	39	974223	AC026537	5443	1-132
HBGDT43	39	974223	AC000360	5444	1-142
HBGDT43	39	974223	AC023583	5445	1-153
HBGDT43	39	974223	AL161613	5446	1-63
HBGDT43	39	974223	AC062010	5447	1-155
HBGDT43	39	974223	AC004803	5448	1-154
HBGDT43	39	974223	AC023583	5449	1-59 1391-1548
HBGDT43	39	974223	AL161613	5450	1-129
HBGDT43	39	974223	L81574	5451	1-315 1979-2215 2720-3771
HBGDT43	39	974223	AL356496	5452	1-131
HBGFA62	40	954306	AC016889	5453	1-700 855-956 962-1444 1446-2545 2846-3201 3316-3569 4130-4421 4424-4461
HBGFA62	40	954306	AC016889	5454	1-35 309-427 1161-1286 3151-3255 3263-3604 4836-5346

					5473-5765 6231-6283 6387-6534
HBGMD62	42	933763	AL031258	5455	1-692 707-1312
HBGMD62	42	933763	AC068332	5456	1-671
HBGMD62	42	933763	AL031258	5457	1-349 438-545 675-725 744-903 1124-1593 1726-1832 1904-1966 2656-2704
HBGMF10	43	966132	AC068259	5458	1-743 914-1113 1118-1586
HBGMF10	43	966132	AC068259	5459	1-466
HBGMF10	43	966132	AC068259	5460	1-279
HBGMZ39	45	947112	AC008537	5461	1-1186
HBGMZ39	45	947112	AC019337	5462	1-1182
HBGMZ39	45	947112	AC008537	5463	1-1993 2105-2385 2736-3068 4364-4489 6546-6781 7025-8165
HBGMZ39	45	947112	AC019337	5464	1-1991 2103-2383 2734-3066 4360-4485 6541-6776 7021-8159
HBGMZ39	45	947112	AC008537	5465	1-734 767-1001
HBGMZ39	45	947112	AC019337	5466	1-158 291-565 598-832
HBGND09	47	848219	AL139288	5467	1-1670
HBGND09	47	848219	AC023889	5468	1-1670
HBGND09	47	848219	AC026657	5469	1-1477
HBGND09	47	848219	AC023889	5470	1-440
HBGND09	47	848219	AL139288	5471	1-397
HBGND09	47	848219	AC026657	5472	1-396
HBGND09	47	848219	AC023889	5473	1-396
HBGNJ14	48	914594	AC004156	5474	1-56 391-1058

					1079-1478 1996-2053 2539-2612 2844-3219 3313-3602 3796-3919 4012-4767
HBGNJ14	48	914594	AC004156	5475	1-275
HBGNO07	50	952212	AC073131	5476	1-1122
HBGNO07	50	952212	AC008403	5477	1-1630 2058-2480 4161-4577 5334-5745 6732-6865 7024-7163 10746-11227 11908-12229 12481-13862
HBGNO07	50	952212	AC008403	5478	1-482 2074-2191 3067-3427 3514-3666 4176-4250 4718-4839 5313-5692 10395-10491 10694-10779 11107-11256 12127-12209 12283-12405 12543-13031 13771-14040
HBGNO07	50	952212	AC008403	5479	1-128 172-232 1302-2232
HBGNQ31	51	887152	AL118522	5480	1-258 787-912 2028-2776 3673-3948 4188-4463
HBGNQ31	51	887152	AL118522	5481	1-1160
HBGNW29	52	969396	AL139288	5482	1-1670
HBGNW29	52	969396	AC023889	5483	1-1670
HBGNW29	52	969396	AC026657	5484	1-1477
HBGNW29	52	969396	AC023889	5485	1-440
HBGNW29	52	969396	AL139288	5486	1-397
HBGNW29	52	969396	AC026657	5487	1-396

HBGNW29	52	969396	AC023889	5488	1-396
HBGOB07	53	883111	AC008655	5489	1-895
HBGOB07	53	883111	AC008655	5490	1-1013
HBGOB07	53	883111	AC008655	5491	1-909 1371-1545 3390-3501 4360-4549 5287-5337 5422-5540 7645-7790 8678-8898 9930-10085
HBGPH02	58	918513	AC003037	5492	1-492
HBGPH02	58	918513	AC003037	5493	1-86 3463-3839 4494-4881 4901-6058
HBGPH02	58	918513	AC003037	5494	1-2178 2394-3039 3041-3358 4072-4175 4212-4316 4571-4941 5381-5529 5783-5886 6445-6588 8722-8835
HBGPK33	59	973425	AC012305	5495	1-712
HBGPK33	59	973425	AC067853	5496	1-712
HBGPK33	59	973425	AC067853	5497	1-601
HBGPV05	60	930706	AC020866	5498	1-592
HBGSD40	62	923142	AC007783	5499	1-215 697-1759
HBGSD40	62	923142	AC022007	5500	1-555
HBGSD40	62	923142	AC018809	5501	1-867
HBGSD40	62	923142	AC007783	5502	1-534
HBGSD40	62	923142	AC007783	5503	1-314 814-969 1228-1301 1391-1502 2374-2548 2750-3470
HBGSD40	62	923142	AC022007	5504	1-279
HBGSD40	62	923142	AC022007	5505	1-314 814-969 1228-1301 1391-1502

					2374-2548 2750-3492 3815-3858 4506-4812 5780-6087 6765-6905 7117-7178 11051-11101 11244-11380 11469-11524 12621-12789 12919-13141 13291-13351 13474-13835 14502-14734 14773-15067 15215-16491
HBGSD40	62	923142	AC018809	5506	1-314 814-969 1228-1301 1391-1502 2375-2549 2751-3431
HBGTL01	64	914573	Z97986	5507	1-696 3066-3591
HBGTL01	64	914573	Z97986	5508	1-334
HBANAN41	69	655842	AC005729	5509	1-307
HBANAN41	69	655842	AC005729	5510	1-116
HBANAN41	69	655842	AC005729	5511	1-177
HBANAX71	71	530843	AL157375	5512	1-87
HBANAX71	71	530843	AL157375	5513	1-430
HBANAY58	72	558193	AC046185	5514	1-836
HBANBT52	73	524869	AC069303	5515	1-488
HBANBT52	73	524869	AC069303	5516	1-205
HBANBT52	73	524869	AC069303	5517	1-315
HBZAJ09	74	655769	AC019232	5518	1-315
HBZAJ09	74	655769	AC025171	5519	1-315
HBZAJ09	74	655769	AC019232	5520	1-324
HBZAJ09	74	655769	AC025171	5521	1-148
HBZAJ09	74	655769	AC019232	5522	1-148
HBZAJ09	74	655769	AC025171	5523	1-283
HBZSH16	75	655619	AC069483	5524	1-554
HBZSH16	75	655619	AC069483	5525	1-920
HBZSH71	76	760418	AC018693	5526	1-741
HBZSH71	76	760418	AC018693	5527	1-252
HBZSI73	77	655737	AC067954	5528	1-313
HBZSI73	77	655737	AC067954	5529	1-326

HBZSK17	78	664013	AC005005	5530	1-139 521-674 838-1409 1438-1598 1860-1995 6648-6796 7196-7292 7385-7460 7554-7650 8380-8713 8789-8863 9491-9560 9642-9826 10042-10528 11147-11210 13983-15090 15211-15587 15681-16021 17348-17536 17744-17862 17957-18234 18373-18580 19081-19435 19568-19733 19815-19932 20132-20466 22166-22791 22824-23307
HBZSK17	78	664013	AC005005	5531	1-1393 2604-2971
HCBMV01	79	914333	AP002479	5532	1-401
HCBMV01	79	914333	AC012569	5533	1-193 379-463 1042-1115 2571-3004 3344-3468 4339-4433 5418-5606 5875-6012 6119-6519 7622-7713
HCBMV01	79	914333	AP001895	5534	1-74 1527-1591 1656-1960 2300-2424 3295-3389 4374-4562

					4831-4968 5075-5475 6579-6670
HCBMV01	79	914333	AP002479	5535	1-189
HCBMV01	79	914333	AC012569	5536	1-87
HCBMV01	79	914333	AP001895	5537	1-87
HCBMV01	79	914333	AP001895	5538	1-108
HCBNW02	80	950897	AF205589	5539	1-32 110-254 333-849 918-999 1069-1147 1231-1322 1435-1687 1765-1881 1958-2357 2441-3044 3104-3153 3226-3549 3626-3791 3874-4018 4089-4184 4258-4377 4424-5493 5591-5736 5834-5922 6196-6415 6479-6654 6735-6895 7030-7124 7229-7371 7452-7567 7707-7796 7887-7969 8059-8133 8149-8306 8381-8736
HCDMB01	83	915613	AC012484	5540	1-355
HCDMC01	86	915239	AC005789	5541	1-48 1051-2390 2839-3458
HCDMC01	86	915239	AC005789	5542	1-1721 2187-3101 3194-3363 4200-4903 5310-5493 6194-6294



					7366-7482 7598-7676 8092-8778 8869-9496
HCDMD23	87	676799	AC018743	5543	1-801
HCDMD23	87	676799	AC018630	5544	1-413
HCDMD23	87	676799	AC018743	5545	1-138
HCDMD23	87	676799	AC018630	5546	1-177
HCHAD40	88	923764	AC006096	5547	1-240 737-1362
HCHAD40	88	923764	AC006106	5548	1-240 736-1423
HCHAD40	88	923764	AC006108	5549	1-240 736-1359
HCHAD40	88	923764	AC006179	5550	1-230 1021-1223
HCHAD40	88	923764	U82205	5551	1-255 736-849 1023-1457
HCHAD40	88	923764	U82208	5552	1-240 736-1425
HCHAD40	88	923764	AC006186	5553	1-2213 2217-2456 2952-4550 4562-4643 4906-5701
HCHAD40	88	923764	AC006171	5554	1-240 736-1540 7244-8075 8087-8167
HCHAD40	88	923764	AC006177	5555	1-2212 2216-2455 2951-4547 4559-4639 4902-5697
HCHAD40	88	923764	AC006180	5556	1-240 736-1625
HCHAD40	88	923764	U82210	5557	1-2210 2214-2453 2949-4547 4559-4614 4899-5620
HCHAD40	88	923764	AC006185	5558	1-240 736-1359
HCHAD40	88	923764	AC006184	5559	1-2204 2208-2447 2943-3574

					3724-4540 4552-4633 4896-5715
HCHAD40	88	923764	AC006172	5560	1-240 847-1425
HCHAD40	88	923764	AC006099	5561	1-240 736-1424
HCHAD40	88	923764	AC006103	5562	1-240 737-2325
HCHAD40	88	923764	AC006098	5563	1-240 736-1424
HCHAD40	88	923764	AC006096	5564	1-2211
HCHAD40	88	923764	AC006106	5565	1-2215
HCHAD40	88	923764	AC006108	5566	1-2210
HCHAD40	88	923764	AC006179	5567	1-358
HCHAD40	88	923764	U82205	5568	1-2213
HCHAD40	88	923764	U82208	5569	1-2212
HCHAD40	88	923764	AC006171	5570	1-2213
HCHAD40	88	923764	AC006177	5571	1-67 1558-1614 1692-2134 2610-2767 4075-4344 5072-5484 5971-6837 7042-7752
HCHAD40	88	923764	AC006180	5572	1-2213
HCHAD40	88	923764	AC006171	5573	1-794
HCHAD40	88	923764	AC006185	5574	1-2206
HCHAD40	88	923764	AC006184	5575	1-130
HCHAD40	88	923764	AC006172	5576	1-2211
HCHAD40	88	923764	AC006099	5577	1-2212
HCHAD40	88	923764	AC006103	5578	1-2213
HCHAD40	88	923764	AC006098	5579	1-2212
HCHAR16	89	675465	AC068327	5580	1-402 667-3113
HCHAR43	90	715128	AC003036	5581	1-444 4270-4530 7834-7966 8367-8509 9404-9466 9576-9674
HCHAR43	90	715128	AC003036	5582	1-550
HCHBQ03	92	923763	AC006106	5583	1-240 736-1423
HCHBQ03	92	923763	U82205	5584	1-255 736-849

					1023-1457
HCHBQ03	92	923763	U82208	5585	1-240 736-1425
HCHBQ03	92	923763	AC006186	5586	1-2213 2217-2456 2952-4550 4562-4643 4906-5701
HCHBQ03	92	923763	AC006171	5587	1-240 736-1540 7244-8075 8087-8167
HCHBQ03	92	923763	AC006177	5588	1-2212 2216-2455 2951-4547 4559-4639 4902-5697
HCHBQ03	92	923763	AC006180	5589	1-240 736-1625
HCHBQ03	92	923763	U82210	5590	1-2210 2214-2453 2949-4547 4559-4614 4899-5620
HCHBQ03	92	923763	AC006185	5591	1-240 736-1359
HCHBQ03	92	923763	AC006184	5592	1-2204 2208-2447 2943-3574 3724-4540 4552-4633 4896-5715
HCHBQ03	92	923763	AC006172	5593	1-240 847-1425
HCHBQ03	92	923763	AC006099	5594	1-240 736-1424
HCHBQ03	92	923763	AC006103	5595	1-240 737-2325
HCHBQ03	92	923763	AC006098	5596	1-240 736-1424
HCHBQ03	92	923763	AC006106	5597	1-2215
HCHBQ03	92	923763	U82205	5598	1-2213
HCHBQ03	92	923763	U82208	5599	1-2212
HCHBQ03	92	923763	AC006171	5600	1-2213
HCHBQ03	92	923763	AC006177	5601	1-67 1558-1614 1692-2134

					2610-2767 4075-4344 5072-5484 5971-6837 7042-7752
HCHBQ03	92	923763	AC006180	5602	1-2213
HCHBQ03	92	923763	AC006171	5603	1-794
HCHBQ03	92	923763	AC006185	5604	1-2206
HCHBQ03	92	923763	AC006184	5605	1-130
HCHBQ03	92	923763	AC006172	5606	1-2211
HCHBQ03	92	923763	AC006099	5607	1-2212
HCHBQ03	92	923763	AC006103	5608	1-2213
HCHBQ03	92	923763	AC006098	5609	1-2212
HCHOA76	95	740102	AL355975	5610	1-322
HCHOA76	95	740102	AC022795	5611	1-300
HCHOA76	95	740102	AL353577	5612	1-279
HCHOA76	95	740102	AC026144	5613	1-183
HCHOA76	95	740102	AC011036	5614	1-193
HCHOA76	95	740102	AC068519	5615	1-312
HCHOA76	95	740102	AL353701	5616	1-168
HCHOA76	95	740102	AC068755	5617	1-190
HCHOA76	95	740102	AC009899	5618	1-175
HCHOA76	95	740102	AC021616	5619	1-57
HCHOA76	95	740102	AC068196	5620	1-316
HCHOA76	95	740102	AL162741	5621	1-45
HCHOA76	95	740102	AC011994	5622	1-154 930-1106 1119-1633 2173-2298
HCHOA76	95	740102	AC002369	5623	1-586 2559-2651 3329-3426 3756-5088
HCHOA76	95	740102	AC068196	5624	1-214
HCHOA76	95	740102	AL162741	5625	1-102
HCHOA76	95	740102	AC002369	5626	1-228
HCHOD89	96	954866	AC025769	5627	1-58 297-454 1087-1366 2938-3671 3704-3938 3973-5157 5160-7151 7263-7543 7894-8226 9524-9649 11707-11942

					12187-13327
HCHOD89	96	954866	AC008537	5628	1-1186
HCHOD89	96	954866	AC019337	5629	1-1182
HCHOD89	96	954866	AC008537	5630	1-1993 2105-2385 2736-3068 4364-4489 6546-6781 7025-8165
HCHOD89	96	954866	AC019337	5631	1-1991 2103-2383 2734-3066 4360-4485 6541-6776 7021-8159
HCHOD89	96	954866	AC008537	5632	1-734 767-1001
HCHOD89	96	954866	AC019337	5633	1-158 291-565 598-832
HCHQB06	98	934941	AC073251	5634	1-409
HCOMZ41	100	932878	AC006512	5635	1-83 936-1185
HCOMZ41	100	932878	U47924	5636	1-459 955-1204
HCOMZ41	100	932878	AC006512	5637	1-158 424-946 1266-1460 1769-1850 2324-2667 4720-5597 7030-7663 8193-8438 8565-8902 9074-9181 9552-9638 9830-9997 11068-11206 11336-11497 12752-13412 13503-13691 13754-13853 14203-14738
HCOMZ41	100	932878	AC006512	5638	1-818 963-1440 1469-1958 2220-3076

					3455-3663 3931-4285 4549-4632 4696-5069 5245-5337 5461-5775
HCOMZ41	100	932878	U47924	5639	1-158 424-946 1266-1460 1769-1850 2324-2667 4720-5597 7030-7663 8193-8438 8565-8902 9074-9181 9552-9638 9830-9997 11068-11206 11336-11497 12752-13412 13503-13691 13754-13853 14203-14738
HCOMZ41	100	932878	U47924	5640	1-818 963-1440 1469-3076 3455-3663 3931-4285 4549-4632 4806-4965 4979-5001 5245-5337 5461-5775
HCOOG04	101	925748	AC012589	5641	1-524
HCOOG04	101	925748	AC012589	5642	1-2408 3890-4040 4216-4268 7091-7175
HCOOI07	102	951665	AC074191	5643	1-710
HCOOI07	102	951665	AC022240	5644	1-710
HCOOM77	103	969161	AC025572	5645	1-516
HCOOX10	104	961595	AC005005	5646	1-484 517-1142 2842-3176 3376-3493 3575-3740

					3873-4227 4728-4935 5074-5351 5446-5564 5772-5960 7287-7627 7721-8097 8218-9325 12098-12161 12780-13266 13482-13666 13748-13817 14445-14519 14595-14928 15658-15754 15848-15923 16016-16112 16512-16660 21313-21448 21710-21870 21899-22470 22634-22787 23169-23307
HCOOX10	104	961595	AC005005	5647	1-368 1579-2971
HCOOZ11	105	965306	AL022238	5648	1-121 899-983 1445-1513 2166-3430 3550-3763 3859-3972 4449-4595 4960-5152 5385-5529 5744-5972 6327-7067 7097-7152 7210-8073 8079-8680 8772-11399 12956-13517 13736-14155 14311-14753 16294-16357 16648-16806 16874-17059 17685-17787

HCOOZ11	105	965306	AL022238	5649	1-540
HCOOZ11	105	965306	AL022238	5650	1-665
HCOQE11	107	965299	AL132777	5651	1-788 884-2272
HCOQE11	107	965299	AL132777	5652	1-312
HCOQQ07	109	951658	AC013267	5653	1-734 831-1524
HCOQQ07	109	951658	AC013267	5654	1-103
HCOQQ07	109	951658	AC013267	5655	1-620
HE8SG46	110	961388	AC022598	5656	1-2668
HE8SG46	110	961388	AC022598	5657	1-144 199-788
HEAAB77	112	574510	AC063924	5658	1-365
HEAAB77	112	574510	AC009248	5659	1-365
HEAAK46	113	574232	AC023160	5660	1-864
HEAAK46	113	574232	AC023157	5661	1-675
HEAAK46	113	574232	AC023157	5662	1-413
HEAAM16	114	574008	AC036239	5663	1-354
HEAAV10	120	968200	AL031178	5664	1-591 631-1516 1572-2046 2329-2724 3570-3721 4393-5225 5256-5351 5672-6501 6686-7086 8367-8855 9380-9440
HEAAV10	120	968200	AL031178	5665	1-343 411-542
HEAAV10	120	968200	AL031178	5666	1-1427
HEEAD64	123	741305	AC011457	5667	1-795 2400-2512
HEEAD64	123	741305	AC006116	5668	1-795 2400-2512
HEEAD64	123	741305	AC011457	5669	1-391
HEEAD64	123	741305	AC006116	5670	1-391
HEEAH07	124	851219	AC019039	5671	1-112
HEEAK84	128	780838	AC004549	5672	1-570
HEEAK84	128	780838	AC004549	5673	1-873
HEEAL31	129	887312	AP000872	5674	1-1131
HEEAL31	129	887312	AP001533	5675	1-1134
HEEAL31	129	887312	AC020735	5676	1-1130
HEEAL31	129	887312	AP000872	5677	1-523
HEEAL31	129	887312	AP001533	5678	1-527



HEEAL31	129	887312	AP001533	5679	1-330
HEEAL31	129	887312	AC020735	5680	1-330
HEEAL31	129	887312	AC020735	5681	1-527
HEEAN24	130	676721	AC073835	5682	1-519
HEEAN24	130	676721	AC012366	5683	1-656
HEEAN24	130	676721	AC012366	5684	1-633 782-1160
HEEAN24	130	676721	AC073835	5685	1-379
HEEAS58	131	735620	AC022730	5686	1-562
HEEAU79	132	706935	AC069419	5687	1-744
HEEAU79	132	706935	AC011311	5688	1-744
HEEAU79	132	706935	AC011311	5689	1-316
HEEAU79	132	706935	AC011311	5690	1-500 3112-3179 3264-3366 4303-4458 5803-5999 6173-6605 7699-7818 8085-8264 12380-13064 13449-14180 14198-14750 15016-15543 15578-15659 16183-16694 17010-19286
HEEAW01	133	851213	AC003117	5691	1-384
HEEAW01	133	851213	AC003117	5692	1-289
HEEAW13	134	656299	AC005344	5693	1-1022
HEEAW13	134	656299	AC005344	5694	1-612
HEEAW13	134	656299	AC005344	5695	1-569
HEGAA24	135	676716	AC015818	5696	1-416
HEGAA24	135	676716	AC022319	5697	1-416
HEGAA24	135	676716	AC022596	5698	1-429
HEGAA24	135	676716	AC005324	5699	1-419
HEGAA24	135	676716	AL353996	5700	1-429
HEGAA24	135	676716	AC015818	5701	1-435
HEGAA24	135	676716	AC022596	5702	1-435
HEGAA24	135	676716	AC022319	5703	1-435
HEGAA24	135	676716	AC005324	5704	1-435
HEGAA24	135	676716	AL353996	5705	1-434
HEGAB84	137	823900	AC007040	5706	1-750 1028-1687 2050-2327 3305-3352

HEGAB84	137	823900	AC007040	5707	1-513
HEGAB84	137	823900	AC007040	5708	1-745 1107-1335
HEGAC95	139	965183	AC073320	5709	1-215 450-550 751-963 1947-2154 3417-3891 4361-4477 4682-5067 5123-5417 5449-5561 5673-6658
HEGAC95	139	965183	AC073320	5710	1-100
HEGAI82	140	955291	AP000714	5711	1-650
HEGAI82	140	955291	AP000846	5712	1-115 271-361 1605-1883 4909-5743 6439-7086
HEGAI82	140	955291	AP000869	5713	1-113 274-364 1609-1887 4913-5749 6445-7388
HEGAI82	140	955291	AP000941	5714	1-316 353-846 1544-2355
HEGAI82	140	955291	AP000714	5715	1-104
HEGAI82	140	955291	AP000846	5716	1-421
HEGAI82	140	955291	AP000869	5717	1-421
HEGAK04	141	887299	AP001319	5718	1-790
HEGAK04	141	887299	AP000485	5719	1-789
HEGAK04	141	887299	AP001319	5720	1-471 761-1159 2076-2471 3129-4172 5710-6153
HEGAK04	141	887299	AP000485	5721	1-471
HEGAK04	141	887299	AP001319	5722	1-106
HEGAK04	141	887299	AP000485	5723	1-106
HEGAO83	142	780837	AC024009	5724	1-880 1967-2289 2746-2890 3236-3284
HEGAO83	142	780837	AC040991	5725	1-880 1967-2288

					2745-2889 3235-3283
HEGAO83	142	780837	AC040991	5726	1-176
HEGAP06	143	934705	AC016324	5727	1-870
HEGAP06	143	934705	AC016324	5728	1-465
HEGAP31	144	697419	U73167	5729	1-462 537-572 1142-1632 1720-2993 3778-4687 5675-5764 5875-6565
HEGAP31	144	697419	U90094	5730	1-462 537-572 1142-1632 1720-2993 3778-4687 5675-5764 5875-6565
HEGAP31	144	697419	U73167	5731	1-47 235-1145
HEGAP31	144	697419	U73167	5732	1-463 947-1439 1459-1899 1984-2068 2160-2287 2366-3007 3094-3248 3517-3657 3744-3873 3944-4147 4183-4867
HEGAP31	144	697419	U90094	5733	1-463 947-1439 1459-1899 1984-2068 2160-2287 2366-3007 3094-3248 3517-3657 3744-3873 3944-4147 4183-4867
HEGAP31	144	697419	U90094	5734	1-47 235-1145
HEGAP36	145	706951	AL160314	5735	1-558
HEGAP36	145	706951	AC023226	5736	1-558

HEGAP36	145	706951	AL160314	5737	1-316
HEGAP36	145	706951	AC023226	5738	1-194
HEGAY32	147	699906	AP000759	5739	1-156 199-2013
HEGAY52	148	726316	AC004863	5740	1-272 2151-2257 4711-4808 5669-5932
HEGAY52	148	726316	AC004863	5741	1-517
HEGAY52	148	726316	AC004863	5742	1-307
HEPAA44	150	509456	AP002440	5743	1-554
HEPAD40	153	509002	AC022486	5744	1-599
HEPAD40	153	509002	AC007379	5745	1-599
HEPAD40	153	509002	AC068541	5746	1-599
HEPAD82	154	509452	AC012054	5747	1-199
HEPAD82	154	509452	AC012054	5748	1-367
HEPAK41	157	925146	AL355987	5749	1-1171 2141-2215 2661-2998 3515-3894
HEPAK41	157	925146	AL355987	5750	1-412
HEPAM29	158	508706	AC068515	5751	1-403
HEPAM29	158	508706	AC012256	5752	1-629
HEPAN19	159	508694	AC018422	5753	1-656
HEPAN19	159	508694	AC018422	5754	1-488
HEPAP02	160	926914	AC005041	5755	1-68 87-493 711-838 997-1167 2227-2960 3326-4641 4768-5786
HEPAP02	160	926914	AC005041	5756	1-2920 3439-3667 3839-4332
HEPAP02	160	926914	AC005041	5757	1-143
HEPAP12	161	968771	AC022123	5758	1-704
HEPAS44	162	884083	AC005042	5759	1-526 2088-2310 2826-3158 3165-3449 3645-4062 5680-6042 9261-9489 9723-10014 10575-10710 12839-14011

					17421-17570 17625-17808 19953-20102 20972-21402 21801-22496 23146-23452 25891-26147 27915-28163 36900-37086 40102-40222 40334-40438 41262-41858 42042-42215 44623-45334 45461-45648 47989-48685 52151-52529 52651-52771 55505-56703 57348-57424 58261-58444 58449-58644 58759-59136 59195-60637
HEPAS44	162	884083	AC005042	5760	1-505
HEPBB24	164	508684	AC010862	5761	1-649
HEPBB24	164	508684	AC010862	5762	1-345
HEPBB60	165	855597	AC021139	5763	1-570
HEPBB60	165	855597	AC021139	5764	1-373
HEPBG26	166	967921	AL117692	5765	1-362
HEPBG26	166	967921	AL117692	5766	1-680
HEPBG35	167	508686	AL390242	5767	1-235
HEPBG35	167	508686	AC073965	5768	1-758
HEPBG35	167	508686	AL357055	5769	1-522
HEPBG35	167	508686	AC006286	5770	1-759
HEPBG35	167	508686	AL357055	5771	1-307
HEPBG35	167	508686	AC073965	5772	1-308
HEPBG35	167	508686	AC006286	5773	1-307
HEPBH38	169	707524	AC021881	5774	1-353
HEPBO69	171	888697	AC004464	5775	1-565
HEPBQ47	172	713836	AC015624	5776	1-243
HEPBQ47	172	713836	AC011743	5777	1-94 853-988 2270-2334 3850-4276 4554-4835 5824-5974

					7894-8034 9229-9353 10526-10939 11126-11250 12266-13223
HEPBQ47	172	713836	AC009948	5778	1-125 1141-2098
HEPBQ47	172	713836	AC011743	5779	1-238
HEPBQ47	172	713836	AC009948	5780	1-414
HEPBQ47	172	713836	AC011743	5781	1-914
HEPBQ47	172	713836	AC009948	5782	1-914
HEPBQ69	173	888693	AC011799	5783	1-573
HEPBQ69	173	888693	AC011799	5784	1-413
HEPCD36	176	523670	AC009789	5785	1-379 503-587 1930-2188 3201-5184
HEPCD36	176	523670	AC009789	5786	1-513
HEPCD36	176	523670	AC009789	5787	1-270
HEPCE25	177	529343	AL121747	5788	1-823
HEPCE25	177	529343	AL034548	5789	1-823
HEPCE25	177	529343	AL121747	5790	1-277
HEPCE25	177	529343	AL034548	5791	1-277
HEPCE25	177	529343	AL121747	5792	1-2350
HEPCE25	177	529343	AL034548	5793	1-2350
HEPCO59	178	761094	AC025879	5794	1-1719
HEPCO59	178	761094	AC025879	5795	1-457
HEPCT32	179	947081	AC010458	5796	1-95
HETAD29	186	509311	AP001043	5797	1-816
HETAD29	186	509311	AP001042	5798	1-810
HETAD29	186	509311	AF017257	5799	1-816
HETAF20	187	509308	AC002357	5800	1-143 3480-3539 5870-5907 9786-9929 11763-11888 14141-14317 14874-15265 16913-17243 17405-17765 18111-18491 18570-19232 19921-20301 20521-21086 21437-21767 22569-25231
HETAF89	189	509300	AF209069	5801	1-42

					627-676 926-1197 2577-2756 3159-3250 3354-3404 3563-3766 4737-4811 4915-5019 5614-5717 5891-6054 6953-10137 10601-11304
HETAF89	189	509300	AF209069	5802	1-282
HETAH66	191	799665	AL359837	5803	1-152 1095-1459 1529-1686 1768-2184 3567-3774
HETAH66	191	799665	AC022000	5804	1-152 1095-1459 1529-1686 1768-2183 3566-3773
HETAH66	191	799665	AL359837	5805	1-219
HETAH66	191	799665	AC022000	5806	1-219
HETAJ26	193	508994	AC020735	5807	1-319
HETAJ26	193	508994	AP000625	5808	1-319
HETAJ26	193	508994	AP001316	5809	1-319
HETAJ26	193	508994	AP000625	5810	1-235
HETAJ26	193	508994	AC020735	5811	1-235
HETAJ26	193	508994	AP001316	5812	1-235
HETAN20	195	535359	AC008073	5813	1-1294 3599-3707 4513-4798 5381-5564 5925-6561 8244-8701 8863-8961 10664-10831 11576-11793 12389-12512 13290-13372 16310-16396 16608-17366 17426-17785 17827-19011
HETAN20	195	535359	AC009228	5814	1-1294

					3599-3707 4513-4798 5381-5564 5925-6561 8244-8701 8863-8961 10664-10831 11576-11793 12389-12512 13290-13372 16310-16396 16608-17366 17426-17785 17827-19011
HETAN20	195	535359	AC008073	5815	1-164
HETAN20	195	535359	AC009228	5816	1-164
HETAN20	195	535359	AC008073	5817	1-276
HETAN20	195	535359	AC009228	5818	1-276
HETAP59	196	509118	AL133312	5819	1-1081
HETAP59	196	509118	AL135752	5820	1-743 933-2013
HETAP59	196	509118	AL135752	5821	1-90 528-930 3903-3971
HETAR06	198	960839	AC022399	5822	1-734 1441-2849
HETAR06	198	960839	AP000893	5823	1-735 1442-2850
HETAR60	199	934444	AC026407	5824	1-219 636-859 1024-1742 1914-2559 3181-3527 3853-5646
HETAR60	199	934444	AC011394	5825	1-646 1267-1613 1934-3732
HETAR60	199	934444	AC011394	5826	1-719
HETAZ13	201	536192	AL359915	5827	1-328
HETAZ13	201	536192	AL359915	5828	1-183
HETAZ13	201	536192	AL359915	5829	1-540
HETBA01	202	509189	AL356965	5830	1-286 549-787 873-1395 4371-5746
HETBA01	202	509189	AL356965	5831	1-608
HETBF45	203	508655	AC025187	5832	1-330



HETBF45	203	508655	AC034218	5833	1-330
HETBF45	203	508655	AC025187	5834	1-145
HETBF45	203	508655	AC034218	5835	1-145
HETBH48	204	720853	AC021230	5836	1-311
HETBH48	204	720853	AL390840	5837	1-311
HETBH48	204	720853	AL355523	5838	1-311
HETBH48	204	720853	AC021230	5839	1-264
HETBH48	204	720853	AL390840	5840	1-264
HETBH48	204	720853	AC021230	5841	1-353
HETBH48	204	720853	AL355523	5842	1-264
HETBH48	204	720853	AL390840	5843	1-354
HETBH48	204	720853	AL355523	5844	1-236 264-294
HETCH92	210	921390	AC019233	5845	1-244
HETCH92	210	921390	AC019233	5846	1-193
HETDD18	213	509110	AC072058	5847	1-421
HETDD18	213	509110	AC025218	5848	1-421
HETDD18	213	509110	AC025218	5849	1-1149
HETDE67	214	883018	AC037444	5850	1-531
HETDE67	214	883018	AC010679	5851	1-531
HETDE67	214	883018	AC037444	5852	1-604 1500-1699 2148-2589 2820-3674 3750-4272 4335-4872 5843-6194 6565-6670 6675-7299 7494-8026 8163-8907
HETDE67	214	883018	AC010679	5853	1-604 1500-1699 2148-2589 2820-3674 3750-4272 4335-4872 5843-6194 6565-6670 6675-7299 7494-8026 8163-8907
HETDL92	218	508990	AC074236	5854	1-264
HETDL92	218	508990	AC074236	5855	1-435
HETDN90	219	695021	AC025545	5856	1-259
HETDN90	219	695021	AC069523	5857	1-258
HETDN90	219	695021	AC025545	5858	1-465

					616-1158
HETDN90	219	695021	AC069523	5859	1-114 2644-2745
HETDN90	219	695021	AC069523	5860	1-791 942-1485
HETDW59	222	827093	AL121780	5861	1-284
HETDW59	222	827093	AL121900	5862	1-284
HETDW59	222	827093	AL121780	5863	1-465
HETDW59	222	827093	AL121780	5864	1-310
HETDW59	222	827093	AL121900	5865	1-465
HETDW59	222	827093	AL121900	5866	1-310
HETEB68	223	917400	AC011031	5867	1-102 1406-1757 2809-2924 3135-3217 3311-4155
HETEB68	223	917400	AC011031	5868	1-568 768-1144
HETEB68	223	917400	AC011031	5869	1-182
HETEZ43	225	529591	AL034400	5870	1-163 5267-5398 5504-5654 6565-6700 7275-7412 8080-8260 8342-10872
HETEZ43	225	529591	AL034400	5871	1-497
HETFA40	226	523112	AL358813	5872	1-474
HETFA40	226	523112	AC025992	5873	1-1759
HETFA40	226	523112	AL162612	5874	1-1431 1501-1692 1855-3146 3686-4006 4703-6498
HETFA40	226	523112	AL356957	5875	1-502
HETFA40	226	523112	AC018593	5876	1-1430 1500-1691 1854-3144 3684-3985 4696-6493
HETFA40	226	523112	AL137798	5877	1-1194
HETFA40	226	523112	AL021920	5878	1-1194
HETFA40	226	523112	AC021338	5879	1-1194
HETFA40	226	523112	AL358813	5880	1-756
HETFA40	226	523112	AC025992	5881	1-302
HETFA40	226	523112	AL162612	5882	1-384
HETFA40	226	523112	AL162612	5883	1-850

HETFA40	226	523112	AL356957	5884	1-321
HETFA40	226	523112	AL356957	5885	1-415
HETFA40	226	523112	AC018593	5886	1-332
HETFA40	226	523112	AL137798	5887	1-144 677-1009
HETFA40	226	523112	AC018593	5888	1-1496
HETFA40	226	523112	AL137798	5889	1-266
HETFA40	226	523112	AL021920	5890	1-130
HETFA40	226	523112	AL021920	5891	1-266
HETFA40	226	523112	AC021338	5892	1-340
HETFC82	227	799658	AC003117	5893	1-798
HETFC82	227	799658	AC003117	5894	1-4842
HETFI81	231	523398	AC007405	5895	1-39 892-1999 2103-2501 3264-3326 6690-6768 7849-8001 8366-8551 8558-8601 9768-9873 10994-11103 12261-12621 12779-12873 13681-15129
HETFI81	231	523398	AC007405	5896	1-194
HETHD30	241	935175	AC021808	5897	1-330 1298-2514 2943-2975
HETHD30	241	935175	AC021808	5898	1-312
HETHE56	242	974348	AC007334	5899	1-1691
HETHE56	242	974348	AC007608	5900	1-1691
HETHE56	242	974348	AC007334	5901	1-1017 1671-2298 2580-3268
HETHE56	242	974348	AC007334	5902	1-56 840-2379
HETHE56	242	974348	AC007608	5903	1-1017 1671-2298 2580-3268
HETHE56	242	974348	AC007608	5904	1-56 840-2379
HETHH49	243	967737	AC015645	5905	1-627
HETHH49	243	967737	AC009700	5906	1-77 214-306 404-519 1182-1825

					6494-6614
HETHH49	243	967737	AC009700	5907	1-322
HETHH49	243	967737	AC009700	5908	1-309
HETHO78	245	963592	AC009789	5909	1-1348
HETHO78	245	963592	AC009789	5910	1-517
HETHR24	246	851412	AC024555	5911	1-65 1322-1814 1879-2084 2488-3174 3624-4306 4653-4875 5942-7911
HETHR24	246	851412	AL356796	5912	1-206 610-1296 1746-2428 2774-2996 4063-5628
HETHR24	246	851412	AL356796	5913	1-493
HETHT53	247	974555	AL049750	5914	1-611
HETHT53	247	974555	Z69905	5915	1-611
HETIF01	248	966185	AC016135	5916	1-845
HETIF01	248	966185	AC018512	5917	1-776
HETIF01	248	966185	AC002518	5918	1-150
HETIG71	249	974359	AC009528	5919	1-558 1659-1824
HETIG71	249	974359	AC009528	5920	1-316
HETIU60	253	739804	AC022922	5921	1-726
HETIU60	253	739804	AC022922	5922	1-103
HETJD86	256	909130	AC019027	5923	1-675
HETJD86	256	909130	AL049869	5924	1-233 2467-2605 3956-4685 4819-5326 5669-6024 6878-10901
HETJD86	256	909130	AC019027	5925	1-3169
HETJD86	256	909130	AL049869	5926	1-165
HETJI32	258	806435	AL021997	5927	1-1175
HETJI32	258	806435	AL358785	5928	1-1175
HETJK67	259	751072	AL158821	5929	1-506
HETJN51	260	767932	AC012135	5930	1-562
HETJN51	260	767932	AL160153	5931	1-562
HETJN51	260	767932	AC012135	5932	1-469
HETJN51	260	767932	AC012135	5933	1-58 2070-2379 2778-3068 3566-4200

					4240-6571 6587-7743 7870-9821
HETJN51	260	767932	AL160153	5934	1-58 2070-2379 2778-3068 3566-4200 4240-6572 6588-7744 7871-9824
HETJN51	260	767932	AL160153	5935	1-469
HETJT95	261	789310	AP001961	5936	1-788 872-1462
HETJT95	261	789310	AP001961	5937	1-158 423-565 2290-2739
HETJX04	262	927120	AL390040	5938	1-54 340-441 969-1131 3544-3961 5786-5896 7026-7372 7541-8076 8303-8737 10369-10513 10949-11077 11323-13046
HETJX04	262	927120	AL390040	5939	1-616 881-994
HETJY11	263	966194	AC016653	5940	1-112
HETJY11	263	966194	AL353659	5941	1-44 263-3729
HETKG67	265	974355	AC055774	5942	1-732
HETKH01	266	915320	AC022922	5943	1-726
HETKH01	266	915320	AC022922	5944	1-103
HETKQ65	269	855449	AC002098	5945	1-106 632-766 1032-1392 1896-2014 2340-2921 3822-3955
HETKQ65	269	855449	AC002320	5946	1-103 629-763 1029-1389 1893-2007 2337-2918 3819-3952

HETKX91	271	789797	AC026967	5947	1-641
HETKX91	271	789797	AC073356	5948	1-641
HETKX91	271	789797	AC068762	5949	1-641
HETLB04	273	920894	AC019073	5950	1-780 5430-5615 7641-7685 10826-10887 11255-11332 12359-12669 13590-13776 16097-16197 16225-16569 17409-17588 17614-18145 18212-18277 20025-20135 21203-21289 21668-21798 22067-22836 22902-23233 23289-24983
HETLB04	273	920894	AC009079	5951	1-780 1966-2659 5432-5617 7643-7687 10830-10891 11259-11336 12363-12673 13594-13780 16101-16201 16229-16573 17510-17593 17618-18149 18216-18281 20020-20130 21198-21284 21663-21793 22060-22829 22895-23226 23282-24977
HETLB04	273	920894	AC019073	5952	1-464
HETLB04	273	920894	AC009079	5953	1-454
HETLH89	274	786458	AC067828	5954	1-788
HETLH89	274	786458	AC019036	5955	1-788
HETLH89	274	786458	AC067828	5956	1-1399
HETLH89	274	786458	AC019036	5957	1-1399
HETLM46	275	974361	AC006478	5958	1-445

HETLM46	275	974361	AC018701	5959	1-445
HETLM46	275	974361	AC006478	5960	1-564
HETLM46	275	974361	AC018701	5961	1-564
HJMAZ84	277	919847	AC026443	5962	1-611 670-740 1340-1557 3026-3108 3944-4508
HJMAZ84	277	919847	AC025183	5963	1-611 670-740 1340-1557 3025-3107 3942-5084
HJMAZ84	277	919847	AC025181	5964	1-611 670-740 1342-1559 3027-3109 3945-5087
HJMAZ84	277	919847	AC025183	5965	1-468
HJMAZ84	277	919847	AC026443	5966	1-775
HJMAZ84	277	919847	AC025181	5967	1-468
HJMAZ84	277	919847	AC025183	5968	1-775
HJMAZ84	277	919847	AC025181	5969	1-775
HLMNG77	279	675752	AC020663	5970	1-984 1841-2130 2448-2547 2956-3100 4344-4618 5421-5525 5635-6174 6314-6432 6805-7332 8210-8382 8813-9096 9125-9321 9861-10195 11530-11672 12829-13010 14776-14925
HLMNG77	279	675752	AC020663	5971	1-265
HLWAB50	280	856552	AC016118	5972	1-100 169-643 832-1541
HLWAB50	280	856552	AC008728	5973	1-100 169-643 832-1541
HLWAB50	280	856552	AC016118	5974	1-377

HLWAB50	280	856552	AC008728	5975	1-377
HLWAB50	280	856552	AC016118	5976	1-456
HLWAB50	280	856552	AC008728	5977	1-456
HLWAG51	282	964389	AJ011929	5978	1-5280 5382-8031
HLWAG51	282	964389	AJ011929	5979	1-670
HLWAG51	282	964389	AJ011929	5980	1-1129
HLWAI13	284	920690	AC004231	5981	1-312 317-624 688-1215 5956-6044 6120-6407 7321-7475 8363-8506 8805-8969 9050-9175 10077-10484 11276-11769 11834-12061 12345-12806 12905-12943 13049-13430 13835-14718
HLWAI13	284	920690	AC004231	5982	1-101
HLWAK94	287	715727	AC006513	5983	1-457 2320-4404 4427-5879 5900-7022 7041-9197 9625-9717
HLWAR78	289	723330	AC008741	5984	1-554 1019-1282
HLWAR78	289	723330	AC011271	5985	1-554 1019-1282
HLWAR78	289	723330	AC008741	5986	1-7073
HLWAR78	289	723330	AC011271	5987	1-7072
HLWAR78	289	723330	AC008741	5988	1-331
HLWAR78	289	723330	AC011271	5989	1-331
HLWAU18	290	666273	AC023255	5990	1-153
HLWAU18	290	666273	AC016839	5991	1-163
HLWAU18	290	666273	AC009648	5992	1-182
HLWAU18	290	666273	AC007194	5993	1-134
HLWAU18	290	666273	AC040991	5994	1-110
HLWAU18	290	666273	AC016839	5995	1-365
HLWBA25	292	677944	AP001629	5996	1-789 792-2201
HLWBA25	292	677944	AP001629	5997	1-168



HLWBE31	293	934562	AC018355	5998	1-334
HLWBE31	293	934562	AC034187	5999	1-334
HLWBE31	293	934562	AC025210	6000	1-334
HLWBE31	293	934562	AC018355	6001	1-415
HLWBE31	293	934562	AC034187	6002	1-472
HLWBE31	293	934562	AC025210	6003	1-415
HLWBE31	293	934562	AC018355	6004	1-472
HLWBE31	293	934562	AC034187	6005	1-415
HLWBE31	293	934562	AC025210	6006	1-471
HLWBE92	294	791362	AC020779	6007	1-1023 1224-2000
HLWBE92	294	791362	AC020779	6008	1-469
HLWBE92	294	791362	AC020779	6009	1-292
HLWBJ02	295	919639	AL133404	6010	1-377
HLWBJ02	295	919639	AL133404	6011	1-1203
HLWBK40	296	711000	AP000813	6012	1-438
HLWBK40	296	711000	AP001001	6013	1-438
HLWBK40	296	711000	AP000813	6014	1-302
HLWBK40	296	711000	AP001001	6015	1-864
HLWBK40	296	711000	AP001001	6016	1-302
HLWBO68	298	529323	AC007782	6017	1-359
HLWBO68	298	529323	AC007782	6018	1-283
HLWBQ86	300	703465	AL022097	6019	1-467
HLWBQ86	300	703465	AL022097	6020	1-142
HLWBS14	301	925300	AC022536	6021	1-307
HLWBS14	301	925300	AC022536	6022	1-817
HLWBS43	302	774175	AL122017	6023	1-563
HLWBS43	302	774175	AL122017	6024	1-266
HLWBS43	302	774175	AL122017	6025	1-1023
HLWBZ74	303	679215	AC005281	6026	1-1106
HLWCM44	305	727699	AL121578	6027	1-324
HLWCM44	305	727699	AL121578	6028	1-1169
HLWCO66	307	750779	AC019228	6029	1-528
HLWCQ53	308	869700	AC022784	6030	1-873
HLWCQ62	309	742778	AC010092	6031	1-865 912-3137 3529-4043 5834-5942 6891-7010
HLWCQ76	310	768018	AL121897	6032	1-127 1795-2076 2480-2735 3715-3979 6143-10331
HLWCQ76	310	768018	AL121897	6033	1-302
HLWCQ76	310	768018	AL121897	6034	1-518

HLWDD02	313	953283	AL139317	6035	1-425
HLWDD02	313	953283	AL139317	6036	1-464
HLWDD02	313	953283	AL139317	6037	1-157
HLWDE60	314	868276	AL355379	6038	1-184 893-1005 2129-2607 3137-3804 5061-5704
HLWDE60	314	868276	AL355379	6039	1-761
HLWEE76	316	973315	AC025868	6040	1-156 181-506 667-1063 1498-1959
HLWEE76	316	973315	AC025868	6041	1-202
HLWEE76	316	973315	AC025868	6042	1-219
HLWFG82	317	929647	AC024009	6043	1-1072 1285-1807 2970-3240 3323-3578 3718-4021 4167-4681 4900-4999 5291-5493 5601-6055 7662-8405 8579-8892 9250-9591
HLWFG82	317	929647	AC040991	6044	1-1072 1285-1807 2969-3239 3322-3578 3718-4021 4166-4680 5290-5492 5600-6054 7661-8403 8577-8890 9248-9589 11692-12415
HLWFG82	317	929647	AC009955	6045	1-1072 1285-1807 2969-3239 3322-3578 3718-4021 4166-4680 4899-4998 5290-5492

					5600-6054 7661-8404 8578-8891 9249-9590 11693-12416 12628-13109 13182-13470 13675-13945 14072-16144 16553-16761 18342-18428 18598-18758 19030-19180 19452-19907 20007-20565
HLWFG82	317	929647	AC040991	6046	1-1023 1743-2217 2502-2917 3075-3422
HLWFG82	317	929647	AC009955	6047	1-604 2136-3385 3537-4031 5661-5910 6207-7370 8204-9136 9469-9651 9951-11649
HLWFG82	317	929647	AC009955	6048	1-1023 1743-2217 2502-2917 3075-3422
HMVDU41	319	957804	AC019103	6049	1-431
HMVDU41	319	957804	AC019103	6050	1-148 496-727
HNBTP01	320	914428	AL022238	6051	1-121 899-983 1445-1513 2166-3430 3550-3763 3859-3972 4449-4595 4960-5152 5385-5529 5744-5972 6327-7067 7097-7152 7210-8073

					8079-8680 8772-11399 12956-13517 13736-14155 14311-14753 16294-16357 16648-16806 16874-17059 17685-17787
HNBTP01	320	914428	AL022238	6052	1-540
HNBTP01	320	914428	AL022238	6053	1-665
HNBUR07	324	951814	AP000424	6054	1-418
HNBUR07	324	951814	AF205591	6055	1-417
HNBUR07	324	951814	AP000424	6056	1-828 1172-1743
HNBUR07	324	951814	AF205591	6057	1-670 1172-1746
HNNNA06	326	917723	AC067780	6058	1-2013
HNNNA06	326	917723	AC067780	6059	1-175
HNNNA77	328	917725	AC067780	6060	1-2013
HNNNA77	328	917725	AC067780	6061	1-175
HNOAS06	329	933730	AL358215	6062	1-856
HNOAS06	329	933730	AL390797	6063	1-856
HNOAS06	329	933730	AL390797	6064	1-317
HNOBF57	331	927903	AP000045	6065	1-141 1793-1919 2337-3020 3519-3910 5158-5639 8419-8529 9247-9333 10820-11221 13144-13201 17419-17975 18062-20146 21788-21913
HNOBF57	331	927903	AP000113	6066	1-141 1793-1919 2337-3020 3519-3910 5158-5639 8419-8529 9247-9333 10820-11221 13144-13201 17419-17975 18062-20146

					21788-21913
HNOBF57	331	927903	AP000189	6067	1-141 1793-1919 2337-3020 3519-3910 5158-5639 8419-8529 9247-9333 10820-11221 13144-13201 17419-17975 18062-20146 21788-21913
HNOBF57	331	927903	AP000045	6068	1-187
HNOBF57	331	927903	AP000113	6069	1-187
HNOBF57	331	927903	AP000189	6070	1-187
HNOCT39	333	952611	AC025840	6071	1-733
HNOCT39	333	952611	AC025840	6072	1-476
HOC PJ03	336	917484	AC036229	6073	1-440 602-656 1173-1559 1846-2263 2281-2450 2778-3266
HOC PJ03	336	917484	AC036229	6074	1-779
HODAD73	337	973463	AC076959	6075	1-515
HODAD73	337	973463	AC004889	6076	1-515
HODAD73	337	973463	AC076959	6077	1-370
HODAD73	337	973463	AC004889	6078	1-370
HODAD95	338	974043	Z93783	6079	1-726
HODAD95	338	974043	Z93783	6080	1-229
HODAD95	338	974043	Z93783	6081	1-307
HODAG37	339	529410	AC069320	6082	1-230
HODAG37	339	529410	AC069320	6083	1-376
HODAH32	340	859509	AC004976	6084	1-324
HODAH32	340	859509	AC004976	6085	1-298
HODAJ35	342	529405	AC008781	6086	1-333
HODAJ35	342	529405	AC005618	6087	1-333
HODAJ35	342	529405	AC008781	6088	1-326
HODAJ35	342	529405	AC008781	6089	1-125
HODAJ35	342	529405	AC005618	6090	1-326
HODAJ35	342	529405	AC005618	6091	1-125
HODAK38	343	529404	AC068204	6092	1-383
HODAK95	344	960179	AC010271	6093	1-75 266-889 1331-1431 2199-2234

					2779-3277 3445-3965 4895-5797
HODAK95	344	960179	AC010271	6094	1-136 2057-2217 3443-3543 4471-4543 6172-7809
HODAV80	347	859519	AC010761	6095	1-364
HODAV80	347	859519	AP000878	6096	1-364
HODAV80	347	859519	AC010761	6097	1-812
HODAV80	347	859519	AP000878	6098	1-767 917-1223 1455-2831
HODAW84	349	775425	AC074185	6099	1-1154 1220-1578 1593-2367 2514-3351
HODAW84	349	775425	AC019096	6100	1-1208 1356-2248
HODAW84	349	775425	AC018738	6101	1-82 829-1986 2050-2409 2424-3174 3345-4236
HODAW84	349	775425	AC017104	6102	1-774 922-1813
HODAW84	349	775425	AC019096	6103	1-392
HODAW84	349	775425	AC018738	6104	1-401
HODAW84	349	775425	AC017104	6105	1-392
HODBC01	350	921662	AC022088	6106	1-887
HODBC01	350	921662	AC012589	6107	1-887
HODBC01	350	921662	AC022088	6108	1-123
HODBC01	350	921662	AC012589	6109	1-123
HODBC01	350	921662	AC022088	6110	1-662
HODBC01	350	921662	AC012589	6111	1-662
HODBC07	351	954161	AC055755	6112	1-340
HODBC07	351	954161	AP000767	6113	1-340
HODBC07	351	954161	AP000645	6114	1-340
HODBC07	351	954161	AP000767	6115	1-346
HODBC07	351	954161	AP000645	6116	1-346
HODBC07	351	954161	AC055755	6117	1-346
HODBC07	351	954161	AP000767	6118	1-861
HODBC07	351	954161	AP000645	6119	1-861
HODBE01	352	921655	AC023783	6120	1-180
HODBE01	352	921655	AC023783	6121	1-180

HODBH16	353	927781	AC008826	6122	1-286
HODBH16	353	927781	AC016613	6123	1-286
HODBT58	355	678444	AC027551	6124	1-100
HODBT58	355	678444	AC021649	6125	1-376
HODBT58	355	678444	AC008557	6126	1-376
HODBT58	355	678444	AC022493	6127	1-311
HODBT58	355	678444	AC008557	6128	1-338
HODBT58	355	678444	AC022493	6129	1-338
HODBV71	357	761447	AC026372	6130	1-1224
HODBV71	357	761447	AC044856	6131	1-1147
HODBV71	357	761447	AC073288	6132	1-1147
HODBV71	357	761447	AC044856	6133	1-166
HODBV71	357	761447	AC073288	6134	1-150
HODBV71	357	761447	AC026372	6135	1-424
HODBV71	357	761447	AC044856	6136	1-425
HODBV71	357	761447	AC073288	6137	1-425
HODCA11	358	967732	AC006977	6138	1-383
					394-499
					2564-2769
					3617-3753
					3863-4531
					5760-6332
					8307-8374
					8604-8902
					9558-9675
					11022-11171
					12838-12958
					13542-13671
					13770-13950
					14233-14631
					14669-14765
					17151-17350
					18504-18643
					20745-20834
					22291-22452
					26464-26681
					26756-26866
					28190-28224
					29994-30139
					30933-31056
HODCJ11	362	967320	AC025415	6139	1-477
HODCJ11	362	967320	AC025415	6140	1-431
HODCJ42	363	932638	AC011618	6141	1-697
HODCJ42	363	932638	AC011618	6142	1-323
HODCL88	364	529334	AC026046	6143	1-398
					848-1362
HODCL88	364	529334	AC026046	6144	1-797

HODCL88	364	529334	AC026046	6145	1-290
HODCM62	365	859556	AC018774	6146	1-302
HODCO09	366	573202	AC069378	6147	1-412
HODCO09	366	573202	AC012425	6148	1-412
HODCO09	366	573202	AL132661	6149	1-412
HODCO09	366	573202	AC044855	6150	1-412
HODCO09	366	573202	AC069378	6151	1-411
HODCO09	366	573202	AC012425	6152	1-338
HODCO09	366	573202	AL132661	6153	1-411
HODCO09	366	573202	AC044855	6154	1-338
HODCO09	366	573202	AC069378	6155	1-338
HODCO09	366	573202	AC012425	6156	1-411
HODCO09	366	573202	AL132661	6157	1-338
HODCO09	366	573202	AC044855	6158	1-411
HODCO46	367	573200	AC006407	6159	1-316
HODCO82	368	573195	AC009834	6160	1-500 4451-4574 8243-8369 9901-10227 10315-10434
HODCO82	368	573195	AC009834	6161	1-87 799-918 3613-3738 7543-7694 8075-8140 8384-8501 10749-10867 12458-12594 14660-14793 16991-17117 17690-17895 19598-19726 19971-20125 21034-21516 23395-23513 23775-23907 24646-24777 28056-28291 28749-28822 29696-29930 30554-30819 32721-32911 34077-37157
HODCP69	369	507249	AC022080	6162	1-333
HODCP69	369	507249	AC068293	6163	1-333
HODCP69	369	507249	AC019255	6164	1-333
HODCR43	370	529332	AC023162	6165	1-431



HODCR43	370	529332	AC000380	6166	1-430
HODCR43	370	529332	AC000380	6167	1-379
HODCT07	371	954149	AC016510	6168	1-293
HODCU01	372	917270	AL355822	6169	1-1563
HODCU01	372	917270	AL355822	6170	1-132
HODCU01	372	917270	AL355822	6171	1-83
HODCU02	373	920698	AC018633	6172	1-627
HODCU02	373	920698	AC018633	6173	1-648
HODCU02	373	920698	AC018633	6174	1-190
HODCU62	374	524314	AC078826	6175	1-462
HODCU62	374	524314	AC009246	6176	1-463
HODCU62	374	524314	AC078826	6177	1-106
HODCU62	374	524314	AC009246	6178	1-405
HODCV09	375	973487	AC021721	6179	1-603
HODCW17	376	960051	AC023483	6180	1-375
HODCW17	376	960051	AC016092	6181	1-375
HODCW17	376	960051	AC018822	6182	1-375
HODDD20	379	933726	AC023483	6183	1-319
HODDD20	379	933726	AC024636	6184	1-319
HODDD20	379	933726	AC024898	6185	1-319
HODDD20	379	933726	AC023483	6186	1-261
HODDD20	379	933726	AC024636	6187	1-261
HODDD20	379	933726	AC024898	6188	1-261
HODDD41	380	529390	AL357497	6189	1-70 2356-2495 2576-2678
HODDE28	381	529169	AC008063	6190	1-369
HODDE28	381	529169	AC008063	6191	1-411
HODDE28	381	529169	AC008063	6192	1-106
HODDF51	382	937759	AC012362	6193	1-258
HODDF51	382	937759	AC012362	6194	1-466
HODDG57	383	806204	AC068404	6195	1-659 762-1460
HODDG57	383	806204	AC068404	6196	1-405
HODDN59	389	975437	AL160155	6197	1-630
HODDN59	389	975437	AL136961	6198	1-630
HODDN59	389	975437	AL160155	6199	1-540
HODDN59	389	975437	AL136961	6200	1-540
HODDN59	389	975437	AL160155	6201	1-114
HODDN59	389	975437	AL136961	6202	1-114
HODDN93	390	891236	AC024502	6203	1-190 2311-2654 2971-3108 4195-4501 4743-5311 5569-6222

					6284-6596 6791-10462
HODDN93	390	891236	AC024502	6204	1-298
HODDQ02	391	920962	AC069225	6205	1-560 762-909 1004-1333 1711-2220 3050-3742 3856-3961
HODDQ02	391	920962	AC016138	6206	1-560 762-909 1004-1333 1711-2220 3050-3742 3856-3961
HODDQ02	391	920962	AC069225	6207	1-531
HODDQ02	391	920962	AC069225	6208	1-403
HODDQ02	391	920962	AC016138	6209	1-531
HODDQ02	391	920962	AC016138	6210	1-403
HODDR13	393	529640	AC021663	6211	1-271
HODDR13	393	529640	AC021663	6212	1-297
HODDS67	394	567197	AC012186	6213	1-101 1432-1773 2108-2234 2755-2942 4452-4677 6207-6294 6910-7030 8184-8720 8935-9043 9126-9538 9680-10164 11135-11344 11744-11906 14393-14679 20063-20220 20444-20625 20961-21364 21744-21893 22016-22076 22652-22911 22942-24288 24334-25010 25159-25619
HODDS67	394	567197	AC009066	6214	1-106 191-603 745-1229

					2199-2408 2808-2970 5666-5770
HODDS67	394	567197	AC007225	6215	1-70 5595-5695 7026-7367 7702-7828 8349-8536 10046-10271 11801-11888 12504-12624 13778-14314 14529-14637 14720-15132 15274-15758 16729-16938 17338-17500 20149-20272
HODDS67	394	567197	AC009066	6216	1-538
HODDS67	394	567197	AC007225	6217	1-938 1722-1783 2310-2378 2720-2838 2989-3336 3777-4575 4756-5304 5852-6014 7274-7609 7649-7873 7897-8059 8624-8742
HODDU70	395	529290	AC067917	6218	1-348
HODDU70	395	529290	AC002075	6219	1-348
HODDU70	395	529290	AC067917	6220	1-128
HODDU70	395	529290	AC002075	6221	1-128
HODEA90	397	782242	AL355491	6222	1-899
HODEA90	397	782242	AL356112	6223	1-899
HODEA90	397	782242	AL355491	6224	1-416
HODEA90	397	782242	AL355491	6225	1-301
HODEA90	397	782242	AL356112	6226	1-288
HODEA90	397	782242	AL356112	6227	1-416
HODEB04	398	927022	AL161737	6228	1-785
HODEB04	398	927022	AF011889	6229	1-293 352-1342 1367-1727 2768-3573 3651-3720

					3725-4121 4727-5495 5535-6146
HODEB04	398	927022	AL161737	6230	1-397
HODEB04	398	927022	AL161737	6231	1-361
HODEB04	398	927022	AF011889	6232	1-169 460-489 1955-2315 2718-2773 4633-4881 6517-7694
HODED11	400	966085	AC068205	6233	1-671
HODED11	400	966085	AC068205	6234	1-303
HODED55	401	859368	AC069425	6235	1-642
HODED55	401	859368	AC016937	6236	1-642
HODED55	401	859368	AC069204	6237	1-642
HODED55	401	859368	AC069425	6238	1-281
HODED55	401	859368	AC016937	6239	1-281
HODED55	401	859368	AC069425	6240	1-266
HODED55	401	859368	AC016937	6241	1-266
HODED55	401	859368	AC069204	6242	1-281
HODED87	402	915909	AC034236	6243	1-92 2147-3777
HODED87	402	915909	AC034236	6244	1-132
HODEG86	405	784833	AC013281	6245	1-176 421-500 914-1386 1718-2189 2292-2351 3159-3617 3881-4166 4607-4924 4951-5111 5138-5904 6223-6559 7550-7748 8482-8578 9047-9160 9246-9515 10516-10659 11069-11150
HODEG86	405	784833	AC018988	6246	1-176 421-1386 1718-2189 2292-2351 3159-3617 3881-4166

					4597-4939 4948-5114 5138-5904 6223-6559 7550-7748 8482-8578 9047-9160 9246-9515 10516-10659 11070-11151 11548-11722 26922-26988 27692-27813 28609-28753 30932-30969 31104-31225 32671-32835 37466-37786 38294-38928
HODEG86	405	784833	AC013281	6247	1-277
HODEG86	405	784833	AC013281	6248	1-175
HODEG86	405	784833	AC018988	6249	1-147
HODEG86	405	784833	AC018988	6250	1-277
HODEH22	407	974329	AC068231	6251	1-437
HODEH22	407	974329	AL357752	6252	1-437
HODEH22	407	974329	AC068231	6253	1-287
HODEH22	407	974329	AL357752	6254	1-287
HODEI13	408	859318	AC046158	6255	1-591
HODEI13	408	859318	AC046158	6256	1-409
HODEI13	408	859318	AC046158	6257	1-433
HODEK50	410	859307	AC007075	6258	1-729
HODEK50	410	859307	AC007075	6259	1-401
HODEL92	411	859313	AL139296	6260	1-470
HODEO87	413	930735	AC069316	6261	1-660
HODEO87	413	930735	AP002762	6262	1-660
HODEO87	413	930735	AC069316	6263	1-253
HODEO87	413	930735	AP002762	6264	1-253
HODEO87	413	930735	AC069316	6265	1-84
HODEO87	413	930735	AP002762	6266	1-84
HODEP12	415	965534	AC012659	6267	1-490
HODEP12	415	965534	AJ132410	6268	1-490
HODEP12	415	965534	AJ132411	6269	1-490
HODEP12	415	965534	AC012659	6270	1-363
HODEP12	415	965534	AJ132410	6271	1-363
HODEP12	415	965534	AJ132411	6272	1-363
HODEP12	415	965534	AJ132410	6273	1-352

HODEP86	416	784846	AC068146	6274	1-512
HODEP86	416	784846	AC009292	6275	1-512
HODEP86	416	784846	AC068146	6276	1-366
HODEP86	416	784846	AC068146	6277	1-252
HODEP86	416	784846	AC009292	6278	1-252
HODEP86	416	784846	AC009292	6279	1-366
HODEQ79	418	859287	AL049820	6280	1-599
HODEQ79	418	859287	AL049820	6281	1-107
HODEQ79	418	859287	AL049820	6282	1-373
HODER91	419	789661	AL136109	6283	1-3030 3212-3814 9089-9408 11724-12242 12308-12959 23153-23254 24314-26013
HODER91	419	789661	AC023147	6284	1-3041 3223-3825 9096-9415 11730-12248 12314-12965 23152-23259 24319-26018
HODER91	419	789661	AC022219	6285	1-3030 3212-3814 9084-9403 11717-12235 12301-12952 23145-23246 24307-26006
HODER91	419	789661	AL136109	6286	1-344
HODER91	419	789661	AL136109	6287	1-174
HODER91	419	789661	AC023147	6288	1-122
HODER91	419	789661	AC022219	6289	1-191
HODER91	419	789661	AC022219	6290	1-344
HODES86	420	784815	AC023311	6291	1-1229
HODES86	420	784815	AC068764	6292	1-1429
HODEY08	425	972984	AC025975	6293	1-155 3629-3751 4620-4829 6019-6195 7728-8138 9330-9484 9973-11639
HODEY08	425	972984	AC025975	6294	1-422
HODEY08	425	972984	AC025975	6295	1-624
HODEY13	426	859323	AC023757	6296	1-683

HODEY13	426	859323	AC023757	6297	1-304
HODEY13	426	859323	AC023757	6298	1-279
HODEY80	427	859296	AL049821	6299	1-892
HODEZ02	428	918672	AC058817	6300	1-78 1016-1502
HODEZ02	428	918672	AL356311	6301	1-635 1058-1135 2074-2560 3280-3551
HODEZ02	428	918672	AL356311	6302	1-650
HODEZ11	429	952166	AL049780	6303	1-79 1741-2345 2372-4365 4520-4951 4965-5086 8909-9080 9623-9884 11171-11276 11444-11552 12317-12505 12525-12605 13051-13119 13647-13742 14956-15395 15412-15622 16059-16168 17969-18042 18135-18576 18752-19394 20745-21012 21580-21955 26195-26275 27457-27874 28194-28464 28567-28646 30337-30467 30873-31422 32480-32632 33300-33564 33909-33994 34103-34189 34258-35147
HODEZ11	429	952166	AC006530	6304	1-79 1741-2345 2372-4365 4520-4951 4965-5086

					8909-9080 9623-9884 10977-11278 11446-11554 12290-12489 12509-12589 13035-13103 14941-15380 15397-15607 17239-17337 17953-18026 18119-18560 18736-19378 20729-20996 21563-21938 24485-24568 26177-26257 26973-27081 27090-27231 27439-27856 28176-28446 28549-28628 30319-30449 30855-31404 32460-32612 33295-33452 33889-34006 34238-35127
HODEZ11	429	952166	AL049780	6305	1-76 1605-2548 2583-4747
HODEZ11	429	952166	AL049780	6306	1-1091
HODEZ11	429	952166	AC006530	6307	1-1090
HODEZ11	429	952166	AC006530	6308	1-269
HODFA38	430	934266	AC016992	6309	1-649
HODFB88	433	792979	AC008651	6310	1-368 2142-2889 3649-3930 5148-5773 6717-7220 7679-8094 8917-9211 9671-9754 10002-10093
HODFB88	433	792979	AC008651	6311	1-83
HODFD08	434	958371	AL354943	6312	1-396
HODFD08	434	958371	AL354943	6313	1-322



HODFD45	436	780531	AC009263	6314	1-401
HODFD45	436	780531	AC009263	6315	1-316
HODFH02	439	915257	AC025139	6316	1-706
HODFJ01	441	859549	AC073389	6317	1-509
HODFJ01	441	859549	AC073389	6318	1-401
HODFK18	442	974313	AC068404	6319	1-1251
HODFK18	442	974313	AC068404	6320	1-405
HODFO03	447	859329	AC002044	6321	1-530
HODFP40	449	921651	AC074386	6322	1-622 2363-6063
HODFP40	449	921651	AC004889	6323	1-622 2363-6063
HODFP40	449	921651	AC074386	6324	1-93
HODFP40	449	921651	AC074386	6325	1-1213
HODFP40	449	921651	AC004889	6326	1-1213
HODFP40	449	921651	AC004889	6327	1-93
HODFQ06	451	934304	AL365325	6328	1-529
HODFQ06	451	934304	AL356748	6329	1-529
HODFQ06	451	934304	AC005815	6330	1-529
HODFQ06	451	934304	AL365325	6331	1-290
HODFQ06	451	934304	AL356748	6332	1-290
HODFQ06	451	934304	AC005815	6333	1-290
HODFT52	452	915232	AC069418	6334	1-988
HODFT52	452	915232	AC078803	6335	1-994
HODFU02	453	918536	AC027603	6336	1-601
HODFU02	453	918536	AC011319	6337	1-601
HODFU02	453	918536	AC011319	6338	1-515
HODFU02	453	918536	AC027603	6339	1-515
HODFU47	455	806232	AC069029	6340	1-1072
HODFU47	455	806232	AC055807	6341	1-1072
HODFU47	455	806232	AC069029	6342	1-383
HODFU47	455	806232	AC055807	6343	1-383
HODFU54	456	965526	AC022944	6344	1-584
HODFU54	456	965526	AC022944	6345	1-105
HODFU54	456	965526	AC022944	6346	1-199
HODFW17	457	859322	AC012240	6347	1-592
HODFW17	457	859322	AC018633	6348	1-612
HODFW17	457	859322	AC018633	6349	1-82 84-446
HODFW17	457	859322	AC018633	6350	1-173
HODFX57	458	975259	AC026229	6351	1-420
HODFX57	458	975259	AC022108	6352	1-421
HODFX57	458	975259	AC026229	6353	1-294
HODFX57	458	975259	AC022108	6354	1-295
HODFX57	458	975259	AC026229	6355	1-309
HODFX57	458	975259	AC022108	6356	1-697

HODFY16	459	958329	AL138499	6357	1-74
					1171-1414
					2003-2145
					5281-5390
					6571-6708
					7273-8042
					8498-8581
					9242-9411
					9823-9893
					11229-11269
					11959-12050
					12418-12490
					12981-13017
					13172-13255
					13739-13807
					16333-16490
					16856-16966
					17025-17457
					19018-19053
					19571-19708
					19739-20018
					20071-20166
					20847-20919
					21057-21542
					21820-21861
					22375-22563
					22606-22687
					23332-23536
					23934-23974
					24441-25133
					25607-26151
					27567-27728
					28089-28180
					30591-30662
					31711-31750
					32025-32303
					32728-33189
					33569-33660
					34582-35243
					36002-36089
					37700-38027
					38479-39379
					39447-39994
					39996-40412
					40939-41175
					42777-42859
					43613-43709
					43834-43926

					44676-44750 44978-45061 45219-45304 45604-46116 46592-46981 47116-47969 49128-49249 49765-50272 50400-50495 50679-50942 51613-51736 52713-52789 54124-54402 54837-55118 55215-55764 56143-56632
HODFY16	459	958329	AL138499	6358	1-386 635-1149
HODFY79	460	975253	AC027445	6359	1-644
HODFY79	460	975253	AC061706	6360	1-644
HODFY79	460	975253	AC027445	6361	1-477
HODGC04	462	926863	AC019014	6362	1-244
HODGC61	463	973449	AC020695	6363	1-663
HODGC61	463	973449	AC017086	6364	1-663
HODGC61	463	973449	AL135932	6365	1-663
HODGC61	463	973449	AC020695	6366	1-340
HODGC61	463	973449	AC017086	6367	1-340
HODGC61	463	973449	AL135932	6368	1-340
HODGD05	464	931071	AL355304	6369	1-176
HODGD05	464	931071	AL355307	6370	1-176
HODGD05	464	931071	AL355304	6371	1-90
HODGD05	464	931071	AL355307	6372	1-90
HODGD05	464	931071	AL355307	6373	1-408
HODGH11	468	965105	AL133463	6374	1-642
HODGH11	468	965105	AL050320	6375	1-642
HODGH91	469	968794	AL033547	6376	1-520
HODGH91	469	968794	AL033547	6377	1-567
HODGH91	469	968794	AL033547	6378	1-429
HODGJ67	471	974297	AL356804	6379	1-414
HODGL54	472	859303	AC023785	6380	1-300 990-1082 1263-1944 3930-3960 4456-4565 4991-5162 7643-7924 8196-8928

					10082-10445
HODGL54	472	859303	AC023785	6381	1-484 1470-1673
HODGL54	472	859303	AC023785	6382	1-576
HODGM46	473	974051	AC002351	6383	1-1278 2155-2236
HODGM46	473	974051	AC002369	6384	1-586 2559-2651 3329-3426 3756-5088
HODGM46	473	974051	AC002351	6385	1-115
HODGM46	473	974051	AC002369	6386	1-228
HODGO46	474	883087	AC037489	6387	1-346 1670-2284 2466-2854 4400-4511 6053-6599 7153-7508 8502-8724 9716-10001 11982-12304
HODGO46	474	883087	AC019171	6388	1-669 797-1185 2733-2844 4386-4932 5136-5165
HODGO46	474	883087	AC037489	6389	1-1408
HODGO46	474	883087	AC037489	6390	1-175
HODGO46	474	883087	AC019171	6391	1-356
HODGO46	474	883087	AC019171	6392	1-345
HODGP37	475	974293	AC023592	6393	1-570
HODGP37	475	974293	AC069441	6394	1-570
HODGP83	476	889967	AC013723	6395	1-110 1542-2027 3382-3689 5800-5966
HODGP83	476	889967	AC009973	6396	1-74 1507-2339 3336-3657 5766-5932
HODGP83	476	889967	AC013723	6397	1-499
HODGP83	476	889967	AC013723	6398	1-314
HODGP83	476	889967	AC009973	6399	1-314
HODGP83	476	889967	AC009973	6400	1-499
HODGQ08	478	958237	AC026000	6401	1-509
HODGQ08	478	958237	AC025510	6402	1-509
HODGQ32	480	974294	AC024497	6403	1-705

HODGQ32	480	974294	AC024497	6404	1-3866
HODGQ92	481	894368	AP000751	6405	1-96 1450-1596 2035-2116
HODGQ92	481	894368	AP000751	6406	1-369
HODGT62	482	974052	AC011008	6407	1-731
HODGT62	482	974052	AC044783	6408	1-731
HODGW08	483	958277	AL121966	6409	1-562
HODGW08	483	958277	AC025054	6410	1-562
HODGW08	483	958277	AC009425	6411	1-562
HODGW08	483	958277	AL121966	6412	1-485
HODGW08	483	958277	AC025054	6413	1-409
HODGW08	483	958277	AL121966	6414	1-409
HODGW08	483	958277	AC025054	6415	1-485
HODGW08	483	958277	AC009425	6416	1-485
HODGW08	483	958277	AC009425	6417	1-409
HODGZ06	486	933783	AC007685	6418	1-452 497-619 1248-2116 2423-2493 2610-2725 3566-3716 4422-4552 6708-7287 12653-12705 12963-13427 17808-17904
HODGZ06	486	933783	AC007685	6419	1-160
HODGZ06	486	933783	AC007685	6420	1-2806 2896-4507
HODGZ10	487	961977	AC064861	6421	1-85 1146-1687
HODGZ10	487	961977	AC073838	6422	1-86 1147-1688
HODGZ10	487	961977	AC064861	6423	1-399
HODGZ10	487	961977	AC073838	6424	1-399
HODHC03	488	922987	AC009237	6425	1-1362
HODHC03	488	922987	AC009237	6426	1-720
HODHC03	488	922987	AC009237	6427	1-307 580-1408
HODHD16	489	974924	AL162431	6428	1-42 915-1065 1167-1633 2254-2484 3637-4873
HODHD16	489	974924	AC064851	6429	1-42 915-1057

					1167-1633 2254-2484 3637-7666 7672-7821 7877-10024
HODHD16	489	974924	AC064851	6430	1-188
HODHD16	489	974924	AL162431	6431	1-413 1767-2068
HODHD16	489	974924	AC064851	6432	1-413 1767-2068
HODHK02	494	918613	AC009944	6433	1-301
HODHK02	494	918613	AC019299	6434	1-301
HODHK02	494	918613	AC009822	6435	1-301
HODHK02	494	918613	AC019299	6436	1-483
HODHK02	494	918613	AC009944	6437	1-483
HODHK02	494	918613	AC009822	6438	1-483
HODHL56	496	847724	AF236876	6439	1-935
HODHL56	496	847724	AC019257	6440	1-935
HODHL56	496	847724	AF236876	6441	1-493
HODHL56	496	847724	AC019257	6442	1-493
HODHO11	497	965529	AC027399	6443	1-317
HODHO11	497	965529	AC027399	6444	1-318
HODHS34	498	965460	AC022665	6445	1-532
HODHS34	498	965460	AL078646	6446	1-317 372-1502
HODHS34	498	965460	AL117349	6447	1-317 372-1502
HODHS34	498	965460	AL078646	6448	1-615
HODHS34	498	965460	AL117349	6449	1-615
HODHY53	499	914554	AC026367	6450	1-669
HODHY53	499	914554	AC027063	6451	1-669
HODJZ90	502	965049	AC009118	6452	1-155 657-767 862-1035 1706-2237 2902-3158 3800-4185 4530-4783 5286-5461 6519-6695 6845-6976 7956-8460 8578-8682 10277-10454 12772-12939 13545-13749 14101-14364

					15084-15617 16693-17078 17284-17820 17893-18820
HODJZ90	502	965049	AC068659	6453	1-168 775-979 1331-1594 2315-2847 3900-4316 4491-5027 5100-7427 7603-8027 8209-8523 9220-9673 9808-9950 10065-10377
HODJZ90	502	965049	AC010287	6454	1-152 1091-1213 1460-1748 2882-3432 5178-5410 5727-5869 7099-7282 8390-8552 9319-9434 9703-9816 10255-10328 10502-10681 11511-11641 13098-13673 14293-14594 14667-14772 15383-15627 17040-17237 18114-18254 18756-18866 18961-19136 19803-20334 20999-21280 21897-22282 22627-22880 23383-23641 24623-24788 24938-25069 26048-26552 26670-26774 28368-28545

					30865-31032 31639-31843 32195-32458 33179-33711 34763-35179 35354-35890 35963-38290 38466-38890 39072-39386 40083-40535 40670-40812 40927-41239
HODJZ90	502	965049	AC068659	6455	1-374
HODJZ90	502	965049	AC010287	6456	1-374
HODJZ90	502	965049	AC010287	6457	1-552
HOFAB61	509	707359	AC015841	6458	1-522 624-2029
HOFAB61	509	707359	AC015841	6459	1-454
HOFAB61	509	707359	AC015841	6460	1-146 1533-2211 2325-2545
HOFMA24	511	782275	AC027590	6461	1-150 819-1344
HOFMA24	511	782275	AC027590	6462	1-309
HOGCX95	591	890607	AC024052	6463	1-1585
HOGCX95	591	890607	AC026640	6464	1-1585
HOGCX95	591	890607	AC026640	6465	1-593
HOGCX95	591	890607	AC024052	6466	1-593
HOOJQ59	594	965013	AC011773	6467	1-112 958-1122 2276-2368 2434-2591 5326-5394 6480-6792 7058-7324 8121-8598 8781-9141 10080-10113 11282-13254 13555-13984 13987-14323 14474-14670 14730-16350 16725-16864 17843-17908
HOOJQ59	594	965013	AC011773	6468	1-268 1581-1897



					4118-4159
HOVAF17	595	576627	AC010907	6469	1-430
HOVAF17	595	576627	AC010907	6470	1-131
HOVAG49	597	927320	AL355615	6471	1-1030 1130-1727
HOVAG49	597	927320	AL136082	6472	1-1030 1130-1727
HOVAG49	597	927320	AL355615	6473	1-392
HOVAG49	597	927320	AL136082	6474	1-392
HOVAI41	598	670963	AL136419	6475	1-100
HOVAI41	598	670963	AL136419	6476	1-146
HOVBQ10	601	964671	AL078474	6477	1-789
HOVBQ10	601	964671	AL078474	6478	1-284
HOVBQ10	601	964671	AL078474	6479	1-69 687-1133 2574-2676 3006-3363 3826-3975 4852-5112 5737-6317
HOVBY34	602	706816	AC006512	6480	1-247 2812-2918 3488-3953 3964-4527 4683-5151 5330-9121 9884-10335 10748-10781 10960-11055 11323-12111 12127-12791 12911-13262 13266-13791 14696-14866 15107-15207 16551-16955 17174-17614 18504-18749 19392-19660 19720-20075 20785-21233 21290-21733 23618-23649 23982-24188 24481-24573 24741-25003 26591-26705

					26738-27249 28479-28858 29065-31669 31926-32887 33667-34293 35229-35682 38114-38771
HOVBY34	602	706816	AC025550	6481	1-405
HOVBY34	602	706816	AC002357	6482	1-1186
HOVBY34	602	706816	AC006512	6483	1-818 963-1440 1469-1958 2220-3076 3455-3663 3931-4285 4549-4632 4696-5069 5245-5337 5461-5775
HOVBY34	602	706816	AC006512	6484	1-738
HOVCA52	604	727170	AC025741	6485	1-696
HOVCI76	606	858845	AL049694	6486	1-469
HOVCI76	606	858845	AL049694	6487	1-476
HOVCJ24	608	858844	AC005096	6488	1-364
HOVCJ24	608	858844	AC005096	6489	1-452
HOVCJ24	608	858844	AC005096	6490	1-161
HOVCM22	609	674177	AC008636	6491	1-1708 1746-1835 2249-2976
HOVCM22	609	674177	AC008675	6492	1-1708 1746-1835 2249-2976
HOVCM22	609	674177	AC008625	6493	1-1712 1750-1839 2253-2980
HOVCM22	609	674177	AC018757	6494	1-700
HOVCM22	609	674177	AC008636	6495	1-399
HOVCM22	609	674177	AC008636	6496	1-512
HOVCM22	609	674177	AC008675	6497	1-512
HOVCM22	609	674177	AC008625	6498	1-512
HOVCM22	609	674177	AC008675	6499	1-400
HOVCM22	609	674177	AC008625	6500	1-399
HOVCM22	609	674177	AC018757	6501	1-955
HOVCO11	610	970814	AC004520	6502	1-3242
HOVCO11	610	970814	AC010677	6503	1-1724 1877-2444 2754-3600

					3759-3976 4113-4236 4295-4403 4868-5153 5486-5685 5729-6209 6382-6482 6747-7765 7838-11596
HOVCO11	610	970814	AC004520	6504	1-423
HOVCO11	610	970814	AC010677	6505	1-41 3758-5500 5561-8116 8808-8972 10854-11380 13142-13690 14343-15093 15286-15643 15801-16163
HOVCO58	611	736065	AC018665	6506	1-416
HOVCQ47	612	496190	AL354979	6507	1-1421
HOVEK70	615	909138	AC016877	6508	1-369 817-2106 2511-2860 4380-5157 6201-6321 7064-7649 11036-11360
HOVEK70	615	909138	AC016877	6509	1-139
HOVJA10	617	961467	AL160290	6510	1-442
HOVJA10	617	961467	AL160290	6511	1-119
HPCAH88	622	953808	AL356212	6512	1-835
HPCAH88	622	953808	AL356212	6513	1-1422
HPCAI68	624	655536	AC026134	6514	1-354
HPCAK16	625	662121	AL139185	6515	1-716
HPCAK16	625	662121	AL139181	6516	1-135 185-285 3899-4614 4653-4942 5462-5478
HPCAK16	625	662121	AL139185	6517	1-290
HPCAK16	625	662121	AL139181	6518	1-724
HPCAK16	625	662121	AL139181	6519	1-554
HPCAK57	626	734931	AL136531	6520	1-430
HPCAK57	626	734931	AL031665	6521	1-430
HPCAK57	626	734931	AL136531	6522	1-378
HPCAK57	626	734931	AL136531	6523	1-396

HPCAK57	626	734931	AL031665	6524	1-396
HPCAK57	626	734931	AL031665	6525	1-378
HPCAL60	627	655723	AC009896	6526	1-1578 1640-1954 2042-2612
HPCAL60	627	655723	AC068429	6527	1-980
HPCAL60	627	655723	AC009896	6528	1-119
HPCAL60	627	655723	AC068429	6529	1-119
HPCAL60	627	655723	AC068429	6530	1-1030
HPCAL86	628	924709	AC073027	6531	1-307
HPCAL86	628	924709	AC026874	6532	1-307
HPCAM22	629	655607	AC002381	6533	1-421
HPCAM22	629	655607	AC002381	6534	1-746
HPCAM22	629	655607	AC002381	6535	1-357
HPCAN59	630	655742	AL358075	6536	1-295
HPCAN59	630	655742	AC053512	6537	1-295
HPCAN59	630	655742	AL358075	6538	1-430
HPCAN59	630	655742	AC053512	6539	1-430
HPCAO04	631	655732	AL390024	6540	1-664
HPCAO04	631	655732	AL160060	6541	1-663
HPCAO04	631	655732	AL390024	6542	1-320
HPCAO04	631	655732	AL160060	6543	1-320
HPCPO07	633	951826	AC010595	6544	1-512
HPCPO07	633	951826	AC021175	6545	1-512
HPDOY06	636	929318	AC024534	6546	1-472
HPDOY06	636	929318	AC068222	6547	1-670 818-1289 1297-1525
HPDOY06	636	929318	AC068222	6548	1-119
HPDOY06	636	929318	AC024534	6549	1-670
HPDPK12	638	969340	AC016737	6550	1-1302
HPDPK12	638	969340	AC016737	6551	1-241
HPDPQ40	639	922464	AC016731	6552	1-608
HPDPQ40	639	922464	AC073119	6553	1-608
HPDPQ40	639	922464	AC016731	6554	1-603
HPDRB01	641	914437	AC016032	6555	1-483 1320-3926 4782-5528 6670-6715
HPDRB01	641	914437	AC040994	6556	1-541
HPDRD28	642	957791	AL139377	6557	1-483
HPDRD28	642	957791	AL139377	6558	1-412
HPDRD28	642	957791	AL139377	6559	1-411
HPDRG92	643	967704	AC069546	6560	1-131 220-297 620-921

					1555-1722 1899-2066 2727-3464 4649-5150
HPDRG92	643	967704	AC012683	6561	1-131 220-297 620-921 1555-1722 1899-2066 2727-3464 4650-5151
HPDRG92	643	967704	AC069546	6562	1-116
HPDRG92	643	967704	AC012683	6563	1-861
HPDRG92	643	967704	AC012683	6564	1-45 915-1022
HPDRO20	644	957678	AC027421	6565	1-426
HPDRO20	644	957678	AL353622	6566	1-172 180-293 2209-2873 2876-3301 4705-6461 6539-6708
HPDRO20	644	957678	AC025860	6567	1-426
HPDRO20	644	957678	AC027421	6568	1-527
HPDRO20	644	957678	AC025860	6569	1-665
HPDVF03	647	922193	AC022084	6570	1-147 388-490 560-958 1148-1479 2004-4169
HPDVF03	647	922193	AC027140	6571	1-147 388-490 560-1021 1138-1469 1993-4158
HPDVF03	647	922193	AC022084	6572	1-453
HPDVY17	650	955902	AC007009	6573	1-435
HPEAF19	651	867892	AC024132	6574	1-344
HPEBA06	652	960802	AL359892	6575	1-655
HPEBA06	652	960802	AL031777	6576	1-655
HPEBA06	652	960802	AL359892	6577	1-802
HPEBA06	652	960802	AL359892	6578	1-345 1680-2328
HPEBA06	652	960802	AL031777	6579	1-340 1677-2325
HPEBA06	652	960802	AL031777	6580	1-545
HPEBA51	653	723298	AL353788	6581	1-434

HPEBA51	653	723298	AL139184	6582	1-434
HPEBA51	653	723298	AL353788	6583	1-143
HPEBA51	653	723298	AL139184	6584	1-143
HPEBD31	654	655760	AC018761	6585	1-538
HPEBD31	654	655760	AC020934	6586	1-538
HPEBD31	654	655760	AC018761	6587	1-263
HPEBD31	654	655760	AC020934	6588	1-736 792-957 1232-1693 1845-2006 2206-2481 2621-3482 3536-3786 3815-4535 4695-5049
HPEBD31	654	655760	AC018761	6589	1-736 792-957 1232-1693 1845-2006 2206-2481 2621-3482 3548-3786 3815-4535 4695-5049
HPEBD31	654	655760	AC020934	6590	1-263
HPEKJ42	657	922391	AC078803	6591	1-384 393-809 961-1370
HPEKJ42	657	922391	AC069418	6592	1-384 393-809 961-1370
HPEKJ42	657	922391	AC078803	6593	1-167
HPEKJ42	657	922391	AC069418	6594	1-167
HPEKJ42	657	922391	AC078803	6595	1-262
HPEKJ42	657	922391	AC069418	6596	1-262
HPEKU27	658	921663	AC011939	6597	1-647
HPEKU27	658	921663	AC011939	6598	1-313
HPFAA06	660	960801	AC004111	6599	1-863 3429-4124
HPFAA06	660	960801	AC010277	6600	1-863 3424-4119
HPFAA06	660	960801	AC004111	6601	1-667
HPFAA06	660	960801	AC004111	6602	1-522
HPFAA06	660	960801	AC010277	6603	1-667
HPFAA06	660	960801	AC010277	6604	1-401
HPFCA36	661	524720	AC007065	6605	1-340 351-738

					1335-1773 3899-4267 14595-14825 18322-18557 19664-20128 20663-20915 22067-22299
HPFCA36	661	524720	AC007065	6606	1-495
HPFCA36	661	524720	AC007065	6607	1-483
HPFCA71	662	655596	AC018681	6608	1-364
HPFCF09	663	536666	AC022417	6609	1-174 1973-2115 2563-3003 3442-3591 4140-4231 5955-6389 6564-7100 8645-8708 8978-9101 10914-11290 11985-12297 13345-13410 14962-15695 18991-19133 20469-22756
HPFCF09	663	536666	AC022417	6610	1-104
HPFCF24	664	655744	AL160279	6611	1-398
HPFCF24	664	655744	AL160279	6612	1-313
HPFCF83	666	781490	AC036220	6613	1-327
HPFCF83	666	781490	AC026273	6614	1-327
HPFCF83	666	781490	AC018963	6615	1-369
HPFCF83	666	781490	AC023099	6616	1-369 627-1264 1708-2248
HPFCF83	666	781490	AC016424	6617	1-393
HPFCF83	666	781490	AC008776	6618	1-369
HPFCF83	666	781490	AC022264	6619	1-369 627-1264 1708-2248
HPFCF83	666	781490	AC024972	6620	1-390
HPFCF83	666	781490	AC036220	6621	1-1419
HPFCF83	666	781490	AC026273	6622	1-1420
HPFCF83	666	781490	AC023099	6623	1-1529
HPFCF83	666	781490	AC016424	6624	1-612
HPFCF83	666	781490	AC008776	6625	1-339 4826-4859
HPFCF83	666	781490	AC018963	6626	1-1382

					1384-1518
HPFCF83	666	781490	AC023099	6627	1-434
HPFCF83	666	781490	AC016424	6628	1-1527
HPFCF83	666	781490	AC022264	6629	1-1529
HPFCF83	666	781490	AC022264	6630	1-434
HPFCF83	666	781490	AC024972	6631	1-1524
HPFCF83	666	781490	AC024972	6632	1-612
HPFCH15	667	655768	AC068428	6633	1-352
HPFCH89	668	655538	AC012589	6634	1-227
HPFCH89	668	655538	AC022088	6635	1-227
HPFCH89	668	655538	AC012589	6636	1-250
HPFCH89	668	655538	AC022088	6637	1-250
HPFCM41	669	655736	AC008278	6638	1-348
HPFCM41	669	655736	AC008271	6639	1-348
HPFCM41	669	655736	AC008278	6640	1-471
HPFCM41	669	655736	AC008271	6641	1-471
HPFCM87	670	925495	AC004479	6642	1-318
HPFCM87	670	925495	AC004480	6643	1-318
HPFCM87	670	925495	AC004479	6644	1-155
HPFCM87	670	925495	AC004480	6645	1-155
HPFCO02	672	867871	AC019103	6646	1-1224
HPFCO67	673	867880	AC024489	6647	1-302
HPFCR21	675	655621	AC066603	6648	1-448
HPFCR21	675	655621	AC066603	6649	1-326
HPFCT53	678	974257	AC078894	6650	1-654
HPFCT53	678	974257	AC026815	6651	1-654
HPFCT53	678	974257	AC034258	6652	1-648
HPFCT53	678	974257	AC078893	6653	1-640
HPFCT53	678	974257	AC068667	6654	1-654
HPFCT53	678	974257	AC073166	6655	1-640
HPFCT53	678	974257	AC074226	6656	1-640
HPFCT53	678	974257	AC027037	6657	1-640
HPFCT53	678	974257	AC078898	6658	1-640
HPFCT53	678	974257	AC068924	6659	1-640
HPFCT62	679	655432	AC016767	6660	1-389
HPFCT62	679	655432	AC026369	6661	1-389
HPFCT62	679	655432	AL078621	6662	1-389
HPFCT62	679	655432	AC016767	6663	1-653
HPFCT62	679	655432	AC026369	6664	1-104 117-884 890-1137
HPFCT62	679	655432	AL078621	6665	1-1121
HPFCV71	681	525554	AL133410	6666	1-957 1117-1339 1594-1735 2021-2186



					2430-2526 2791-2922 3026-3179 3416-3562 3669-3799 3855-4635 4830-4891 5448-6268 6357-7105
HPFCV71	681	525554	AL133410	6667	1-189
HPFCV71	681	525554	AL133410	6668	1-85 1082-1951 2761-3118
HPFCX18	682	655588	AC022598	6669	1-559
HPFCX18	682	655588	AC024367	6670	1-559
HPFCX18	682	655588	AC022598	6671	1-484 539-645
HPFCX18	682	655588	AC022598	6672	1-421
HPFCX18	682	655588	AC024367	6673	1-421
HPFCX18	682	655588	AC024367	6674	1-484 539-645
HPFDD06	683	960700	AL359314	6675	1-282
HPFDD06	683	960700	AL390239	6676	1-418
HPFDD06	683	960700	AL390239	6677	1-157 634-1162
HPFDE38	684	655704	AC073616	6678	1-615
HPFDE38	684	655704	AC061966	6679	1-615
HPFDE38	684	655704	AC061966	6680	1-957
HPFDE38	684	655704	AC061966	6681	1-396
HPFDF79	686	973732	AL139240	6682	1-600
HPFDF79	686	973732	AL139240	6683	1-497
HPFDG58	687	655610	AC021557	6684	1-358
HPFDG58	687	655610	AC021557	6685	1-308
HPFDI23	688	655549	AC044876	6686	1-351
HPFDI23	688	655549	AC010983	6687	1-351
HPFDI23	688	655549	AC010983	6688	1-1694
HPFDL90	689	954333	U73330	6689	1-204
HPFDL90	689	954333	AL137143	6690	1-204
HPFDL90	689	954333	AL137143	6691	1-114
HPFDS59	690	655543	AC004111	6692	1-279
HPFDS59	690	655543	AC004111	6693	1-429
HPFDT17	691	581133	AC021972	6694	1-360
HPFDT17	691	581133	AC023961	6695	1-360
HPFDT17	691	581133	AC023961	6696	1-493
HPFDT54	692	655530	AC078787	6697	1-337
HPFDT54	692	655530	AC068844	6698	1-337

HPFDT54	692	655530	AC068844	6699	1-156 307-357
HPFDT61	693	974569	AC012456	6700	1-429
HPFDT61	693	974569	AC012456	6701	1-508
HPFDU30	694	522113	AL079301	6702	1-353
HPFDU30	694	522113	AL079301	6703	1-368
HPFDU30	694	522113	AL079301	6704	1-477
HPFDU38	695	867879	AP001816	6705	1-357
HPFDU38	695	867879	AC013785	6706	1-357
HPFDU38	695	867879	AP001816	6707	1-1082
HPFDU38	695	867879	AP001816	6708	1-605
HPFDU38	695	867879	AC013785	6709	1-1082
HPFDU38	695	867879	AC013785	6710	1-605
HPFDV71	697	867870	AC004170	6711	1-90
HPFDV71	697	867870	AC004170	6712	1-498 742-1013 1596-1878 2017-2131 2550-3098
HPFDX13	698	655571	AC015499	6713	1-163 842-1416 1593-1862 2203-2279 3755-4525 4585-5183 5285-5721
HPFDX13	698	655571	AC034139	6714	1-163 842-1416 1593-1862 2203-2279 3755-4525 4585-5183 5285-5721
HPFDX13	698	655571	AC015499	6715	1-274
HPFDX13	698	655571	AC034139	6716	1-250 370-1118
HPFDX13	698	655571	AC034139	6717	1-195
HPFDZ20	699	655764	AC026262	6718	1-320
HPFDZ20	699	655764	AC026262	6719	1-145
HPFDZ20	699	655764	AC026262	6720	1-394
HPFEA08	700	960372	AL158145	6721	1-102 605-988 994-1149 1496-1658 1689-2232 2888-3316 4118-5228

					5538-5638 8075-8374 9151-9248 10537-10628 14985-15054
HPFEA08	700	960372	AL158145	6722	1-101
HPFEA32	701	925499	AF228661	6723	1-296
HPFEA32	701	925499	AF215845	6724	1-296
HPIAE79	704	655748	AC011234	6725	1-367
HPIAQ49	706	919469	AL161913	6726	1-434
HPIAQ49	706	919469	AC007951	6727	1-434
HPIAS40	708	928614	AC005606	6728	1-237 839-1786 1974-2464
HPIAS40	708	928614	AC005363	6729	1-237 839-1786 1974-2464
HPIAS40	708	928614	AC005606	6730	1-517
HPIAS40	708	928614	AC005606	6731	1-1306 1548-1968 2231-2776
HPIAS40	708	928614	AC005363	6732	1-517
HPIAS40	708	928614	AC005363	6733	1-1306 1548-1968 2231-2776
HPIAV80	709	615007	AC011747	6734	1-316 562-618 724-1313 1814-2395
HPIAV80	709	615007	AC012495	6735	1-316 562-618 724-1313 1814-2395
HPIAV80	709	615007	AC011747	6736	1-1776
HPIAV80	709	615007	AC012495	6737	1-133 239-638 2245-2345 3320-3556 5015-8143
HPIAZ37	711	655753	AC018613	6738	1-357 1494-1815 2463-5309 5330-8041
HPIAZ37	711	655753	AL356099	6739	1-357 1495-1816 2464-5308 5330-8041

					16792-21577
HPIAZ37	711	655753	AL355474	6740	1-357 1494-1815 2463-5308 5329-8041
HPIBT49	714	655719	AC068558	6741	1-468
HPJAB19	717	655540	AC027164	6742	1-422
HPJAB19	717	655540	AC024388	6743	1-422
HPJAB19	717	655540	AC027164	6744	1-325
HPJAB19	717	655540	AC024388	6745	1-325
HPJAB84	718	655531	AC013471	6746	1-335
HPJAC36	719	655601	AC073476	6747	1-107 2096-2450 3106-3182 3643-3787 4316-4982 5399-5724 6657-7075 7479-7686 9286-9495 9701-9784 10235-10339
HPJAC92	720	867831	AP001374	6748	1-441
HPJAC92	720	867831	AP001845	6749	1-441
HPJAC92	720	867831	AP001374	6750	1-370
HPJAC92	720	867831	AP001845	6751	1-370
HPJAD09	721	655712	AL356873	6752	1-341
HPJAD09	721	655712	AL080239	6753	1-341
HPJAD66	722	655694	Z83851	6754	1-375
HPJAD82	723	655765	AC023550	6755	1-599
HPJAD82	723	655765	AC078819	6756	1-599
HPJAD82	723	655765	AC023550	6757	1-262
HPJAD82	723	655765	AC078819	6758	1-180
HPJAD82	723	655765	AC023550	6759	1-180
HPJAD82	723	655765	AC078819	6760	1-262
HPJAV07	724	952852	AC022990	6761	1-330
HPJAV07	724	952852	AC022990	6762	1-338
HPJAW56	725	823393	AL133367	6763	1-165 783-1556 1977-2558 2777-3332 5836-5901 6380-6716 8410-8804 8835-9058 9117-9251 9256-9300

					11060-11133
					11732-12384
					12444-12715
					13449-13561
					13987-14379
					14896-15192
					15858-15966
					16321-16773
					18398-18513
					19468-19712
					19813-20395
					20559-20943
					20993-22107
					22393-22611
					24662-24850
					24956-25724
					25847-26145
					28326-28682
					31448-31886
					32028-32113
					35668-35923
					36174-36274
					36661-36791
					37689-37782
					38775-39150
					41192-41636
					41806-41916
					42383-42524
					42541-45950
					47201-47609
					47660-48144
					50495-50598
					50986-51806
					52416-52442
					52518-52822
					53922-54114
					54796-54941
					55169-55725
					55755-56418
					56558-57751
HPJAW56	725	823393	AL133367	6764	1-115
HPJAW56	725	823393	AL133367	6765	1-324
HPJBI17	726	655761	AC018493	6766	1-433
HPJBI17	726	655761	AC018840	6767	1-433
HPJBI17	726	655761	AC011327	6768	1-433
HPJBI17	726	655761	AC023514	6769	1-433
HPJBI17	726	655761	AC018493	6770	1-4779

HPJBI17	726	655761	AC018840	6771	1-4959 7250-7380
HPJBI17	726	655761	AC011327	6772	1-4926 7254-7384
HPJBI17	726	655761	AC023514	6773	1-559
HPJBI89	727	655708	AC006071	6774	1-97 806-944 2874-2923 3012-3124 4930-5376 7132-7248 8149-8301 11085-11487 12690-12774 13247-13392
HPJBI89	727	655708	AC002092	6775	1-50 768-905 2835-2884 2973-3083 4894-5636 7096-7212 8116-8253
HPJBI89	727	655708	AC006071	6776	1-676
HPJBK52	728	655751	AC026458	6777	1-635
HPJBK52	728	655751	AC026957	6778	1-519
HPJBK52	728	655751	AC068974	6779	1-638
HPJBK52	728	655751	AC022770	6780	1-638
HPJBK52	728	655751	AF271408	6781	1-519
HPJBK52	728	655751	AC000378	6782	1-636
HPJBK52	728	655751	AF165177	6783	1-637
HPJBK52	728	655751	AF284563	6784	1-438
HPJBK52	728	655751	AC026957	6785	1-1148
HPJBK52	728	655751	AC068974	6786	1-170
HPJBK52	728	655751	AC068974	6787	1-674
HPJBK52	728	655751	AC022770	6788	1-632
HPJBK52	728	655751	AF271408	6789	1-512
HPJBK52	728	655751	AC000378	6790	1-336
HPJBK52	728	655751	AF165177	6791	1-666
HPJBK52	728	655751	AF284563	6792	1-672
HPJBU08	729	958979	AC034223	6793	1-365
HPJBU08	729	958979	AC025459	6794	1-365
HPJBU08	729	958979	AC034223	6795	1-470
HPJBU08	729	958979	AC025459	6796	1-470
HPJBV17	730	655729	AC007394	6797	1-300
HPJCC04	731	926787	AC020746	6798	1-402
HPJCC04	731	926787	AC020746	6799	1-137

					996-1100
HPJCC04	731	926787	AC020746	6800	1-305
HPJCP10	732	964259	AC010384	6801	1-482
HPJCP10	732	964259	AC010471	6802	1-482
HPJCP10	732	964259	AL161724	6803	1-482
HPJCP11	733	966676	AC027746	6804	1-338
HPJCP11	733	966676	AC007962	6805	1-2776
HPJCP11	733	966676	AC007962	6806	1-912
HPJCV50	735	968095	AC024179	6807	1-560
HPJCV50	735	968095	AC005923	6808	1-37 647-1206 1576-1798
HPJCV50	735	968095	AC024179	6809	1-721
HPJCV50	735	968095	AC005923	6810	1-749
HPJCV50	735	968095	AC005923	6811	1-57 649-810 915-1002
HPJCX26	737	655600	AL354668	6812	1-350
HPJCY70	738	655569	AC073576	6813	1-378
HPJCY70	738	655569	AL355916	6814	1-378
HPJCZ03	739	922850	AC019301	6815	1-322
HPJCZ03	739	922850	AC019301	6816	1-115
HPJCZ03	739	922850	AC019301	6817	1-117
HPJCZ06	740	934170	AC012101	6818	1-434
HPJCZ06	740	934170	AC012101	6819	1-261
HPJDX94	744	838748	AC027752	6820	1-385
HPJDX94	744	838748	AC024033	6821	1-385
HPJEE38	745	954970	AC013693	6822	1-1366 2356-2591 2984-3479 3997-4331 4805-5239 6918-7038 7281-7378 7510-7940 8150-8312 8749-8898 8979-9407
HPJEI55	746	926815	AC012141	6823	1-464
HPJEI55	746	926815	AL138843	6824	1-464
HPJEI55	746	926815	AL138787	6825	1-464
HPJEI55	746	926815	AC012141	6826	1-643
HPJEI55	746	926815	AL138843	6827	1-206 2313-2650 3456-4431
HPJEI55	746	926815	AC012141	6828	1-976

HPJEI55	746	926815	AL138843	6829	1-643
HPJEI55	746	926815	AL138787	6830	1-206 2313-2650 3456-4433
HPJEI55	746	926815	AL138787	6831	1-643
HPJEJ39	747	930988	AL162551	6832	1-605
HPJEJ39	747	930988	AL121576	6833	1-605
HPJEQ22	749	867725	AC021715	6834	1-639
HPJEQ22	749	867725	AL163052	6835	1-639
HPJEV06	751	934096	AP000773	6836	1-769
HPJEV06	751	934096	AC018708	6837	1-768
HPJEV06	751	934096	AC011207	6838	1-768
HPJEV06	751	934096	AP000773	6839	1-495 909-997 1276-1446
HPJEV06	751	934096	AC018708	6840	1-409
HPJEV06	751	934096	AP000773	6841	1-409
HPJEV06	751	934096	AC018708	6842	1-495 909-997 1276-1446
HPJEV06	751	934096	AC011207	6843	1-409
HPJEV06	751	934096	AC011207	6844	1-495 909-997 1276-1446
HPLAR41	753	557554	AC025660	6845	1-878 932-1290 1376-4492
HPLAR41	753	557554	AC025660	6846	1-378
HPLBB50	754	503751	AC063933	6847	1-352
HPLBB50	754	503751	AC063933	6848	1-129
HPLBL31	755	503732	AC025504	6849	1-95 214-573 1821-2446 2525-3036 3115-3492
HPLBL31	755	503732	AL139138	6850	1-807 2652-2751 2986-3064 4764-4858 4976-5335 6582-7207 7300-7599
HPLBL57	756	503730	AC026812	6851	1-273
HPLBL57	756	503730	AC002427	6852	1-273
HPLBO61	757	558187	AC004604	6853	1-1105
HPLBO61	757	558187	AC004555	6854	1-3035 3284-3602



					4172-4261 4501-5491 8136-8894 9100-9670 10426-10533
HPLBO61	757	558187	AC004555	6855	1-241
HPMBK34	760	954057	AC067815	6856	1-784
HPMBK34	760	954057	AC005940	6857	1-784
HPMBK34	760	954057	AC067815	6858	1-2349
HPMBK34	760	954057	AC005940	6859	1-2349
HPMBK34	760	954057	AC005940	6860	1-1408
HPMBK49	761	577661	AC032007	6861	1-1545
HPMBK49	761	577661	AC032007	6862	1-350
HPMBK49	761	577661	AC032007	6863	1-745
HPMBU81	767	557870	AL356789	6864	1-490
HPMBU81	767	557870	AL357313	6865	1-491
HPMBU81	767	557870	AL356789	6866	1-298
HPMBU81	767	557870	AL357313	6867	1-475
HPMBX35	768	531058	AC025273	6868	1-202 641-759 1106-1412 2149-2340 3181-3506 3552-3829 4051-4415 5783-6248 7556-8169 10620-10984 11384-11500 11517-11876 12821-12929 14588-14653 15115-15821 18702-18895 21135-21421 23417-24021 26437-26746 26819-26923 29864-30165 30638-31071 31388-31737 32445-32589 33347-33643 33675-34651 34798-35053 35667-36376
HPMBX35	768	531058	AC008915	6869	1-466

					1774-2387 4838-5202 5602-5718 5735-6094 7039-7201 8806-8871 9333-10039 12900-13093 15330-15616 17613-18217 20634-20943 21016-21120 24061-24362 24833-25267 25584-25933 26641-26785 27543-27839 27871-28847 28994-29249 29863-30573
HPMBY83	771	527006	AC011200	6870	1-433
HPMBY83	771	527006	AC011618	6871	1-433
HPMBY83	771	527006	AC011200	6872	1-1097
HPMBY83	771	527006	AC011200	6873	1-105
HPMBY83	771	527006	AC011618	6874	1-278
HPMCB65	773	531289	AL354833	6875	1-316 564-1413 1607-1800 2119-2419 3091-4057 4252-4680 7398-7790 8083-8259 8450-8642 9096-11423 11866-13435
HPMCB65	773	531289	AL354833	6876	1-121
HPMCC73	774	531066	AC023287	6877	1-1159
HPMCC73	774	531066	AC012118	6878	1-1128
HPMCC73	774	531066	AC023287	6879	1-422
HPMCC73	774	531066	AC012118	6880	1-422
HPMCJ14	778	524768	AL031591	6881	1-403
HPMCJ14	778	524768	AC000105	6882	1-403
HPMCJ14	778	524768	AC004032	6883	1-403
HPMCJ19	779	531279	AC026226	6884	1-344
HPMCJ19	779	531279	AC026392	6885	1-242
HPMCJ48	780	577601	AL158821	6886	1-324

HPMCK65	781	742095	AL023807	6887	1-607 627-906 1769-2194
HPMCK65	781	742095	AL023807	6888	1-251
HPMCK65	781	742095	AL023807	6889	1-331
HPMCS65	783	961250	AC024179	6890	1-84 1500-1981 2066-2205 3722-3803 3983-4228 4311-4461 4734-4797 5290-5391 5475-5582 5743-5809 6736-6830 6910-7020 7399-7656 7668-8575 8766-8820 9097-9235 9337-9733
HPMCS65	783	961250	AC005923	6891	1-84 1500-1981 2067-2206 2587-2955 3726-3807 3987-4231 4314-4464 4737-4800 5293-5394 5478-5585 5746-5812 6740-6834 6914-7024 7404-7661 7673-8580 8771-8825 9102-9240 9342-9738
HPMCS65	783	961250	AC005923	6892	1-163 669-841 1063-1188 1281-1537 1717-1896 2103-2213 2634-2715

					3253-3377 3848-3964 4045-4195 4444-4664 4920-5082 5400-5604 6369-7256 8698-10467
HPMCW53	786	727392	AC027281	6893	1-549
HPMCW53	786	727392	AC027281	6894	1-98
HPMCW53	786	727392	AC027281	6895	1-471
HPMCY35	790	571411	AC008265	6896	1-1277
HPMCY35	790	571411	AC013429	6897	1-1277
HPMCY35	790	571411	AC008265	6898	1-838
HPMCY35	790	571411	AC008265	6899	1-308
HPMCY35	790	571411	AC013429	6900	1-303
HPMCY35	790	571411	AC013429	6901	1-838
HPMDJ09	791	582594	AC007378	6902	1-437
HPMDJ09	791	582594	AC007378	6903	1-416
HPMDL78	792	577590	AC023015	6904	1-417
HPMDL78	792	577590	AL162505	6905	1-645 747-1164 2179-2511 3184-3519 4234-4475 4615-4830 4894-5310 6227-6832 6887-6920 7700-7958 8747-8978 9761-9969
HPMDL78	792	577590	AL355392	6906	1-645 747-1164 2180-2512 3185-3520 4235-4476 4616-4831 4895-5228 6228-6833 6888-6921 7701-7959 8748-8979 9762-9970 12013-12114 14227-14369 14379-14518

					15453-15685 16116-16381 21268-21424 22341-22479 22922-23004 23493-23659 23843-24090 27959-28266 30963-31074 35359-35938
HPMDL78	792	577590	AC023015	6907	1-649 751-1168 2183-2515 3188-3523 4345-4479 4628-4786
HPMDL78	792	577590	AL162505	6908	1-426
HPMDL78	792	577590	AL355392	6909	1-426
HPMDL78	792	577590	AL355392	6910	1-485
HPMDO39	793	531275	AC064796	6911	1-299
HPMDO39	793	531275	AC064796	6912	1-321
HPMDO39	793	531275	AC064796	6913	1-334
HPMDT91	795	745346	AL136332	6914	1-116 244-618 1399-1481 2637-2724 2842-2957 3010-3244 3302-3740 3879-4367 4407-4484 4783-5307 5981-6056 6472-6806 6903-7024 7110-7225 7843-8458 8924-9255 10786-10887 12006-12616 13979-15061
HPMDT91	795	745346	AL136332	6915	1-140
HPMDU19	796	577626	AC005281	6916	1-276 835-5981 5998-8928
HPMDU19	796	577626	AC005281	6917	1-529
HPMDZ62	798	531276	AL157392	6918	1-371

HPMEB66	799	531349	AL139145	6919	1-406
HPMEB66	799	531349	AC006500	6920	1-406
HPMEB66	799	531349	AL139145	6921	1-891
HPMEB66	799	531349	AC006500	6922	1-891
HPMEC16	800	867658	AC068884	6923	1-309
HPMEC16	800	867658	AC016772	6924	1-306
HPMEC16	800	867658	AC068884	6925	1-325
HPMEC16	800	867658	AC068884	6926	1-608 1128-1552
HPMEC16	800	867658	AC016772	6927	1-325
HPMEC36	801	668897	AC016526	6928	1-870
HPMEC36	801	668897	AC016526	6929	1-586
HPMEC69	802	702501	AC012513	6930	1-424 586-1132 1352-1892 2036-2445
HPMEC69	802	702501	AC008123	6931	1-424 586-1132 1352-1892 2036-2445
HPMEC69	802	702501	AC009521	6932	1-424 586-1132 1352-1892 2036-2445
HPMEC69	802	702501	AC012513	6933	1-324
HPMEC69	802	702501	AC012513	6934	1-148
HPMEC69	802	702501	AC008123	6935	1-324
HPMEC69	802	702501	AC008123	6936	1-148
HPMEC69	802	702501	AC009521	6937	1-324
HPMEC69	802	702501	AC009521	6938	1-148
HPMED52	803	531347	AC005004	6939	1-1352
HPMED52	803	531347	AC005004	6940	1-184
HPMED52	803	531347	AC005004	6941	1-149
HPMFB28	809	575934	AC010446	6942	1-329
HPMFB37	810	575620	AC018900	6943	1-70 504-564 2078-2335 2559-3145 4386-4975 5038-5201 5354-6773
HPMFB37	810	575620	AC013334	6944	1-70 500-560 2071-2328 2552-3138 4380-4969 5032-5195

					5348-6767
HPMFB37	810	575620	AC018900	6945	1-1338
HPMFB37	810	575620	AC013334	6946	1-1340
HPMFB37	810	575620	AC018900	6947	1-65 175-275 505-590 1039-1164 1861-1949 2695-2914 3021-3150 3483-3638 3728-4338
HPMFB37	810	575620	AC013334	6948	1-111 444-599 689-1288
HPMFB75	811	526594	AC021754	6949	1-657 732-1324 1332-1738 1760-1883 2721-2831 2913-3037 4456-4576 4601-5008 5171-5281
HPMFB75	811	526594	AC021754	6950	1-352
HPMFEB60	814	577636	AL139005	6951	1-431
HPMFJ55	818	577588	AC026634	6952	1-457
HPMFJ55	818	577588	AC026634	6953	1-884
HPMFL08	819	959569	Z93016	6954	1-477
HPMFL08	819	959569	Z93016	6955	1-650
HPMFL80	820	874359	AC004841	6956	1-2013 2041-2324 2337-2413 3586-3800 3839-4574 4894-5336 5361-5776 5997-6491 6570-6838 7577-7687 7777-8676 9682-9806 9879-10148 11341-11493 13101-13238 15431-15566 15940-16011

					16119-16181
HPMFL80	820	874359	AC004841	6957	1-561
HPMFL80	820	874359	AC004841	6958	1-356
HPMF29	821	582595	AC026558	6959	1-1062
HPMF29	821	582595	AC023973	6960	1-1062
HPMF29	821	582595	AC026558	6961	1-1331
HPMF29	821	582595	AC023973	6962	1-127
HPMF29	821	582595	AC023973	6963	1-1332
HPMFP30	824	577629	AC008072	6964	1-322
HPMFP30	824	577629	AC008072	6965	1-258
HPMFP38	825	575914	AC006121	6966	1-76 283-455 1081-2096 2241-2468 3824-3881 4776-4998 5882-6048 7438-7572 8605-8867 8905-9483 9616-9748 10809-11421 12429-12580 12991-13310 14224-14404 15332-16217 18288-18453 18666-19007 19613-20374 20936-21073 21639-22085 22088-22332 22816-22950 24715-24977 25733-26161 26930-27124 27348-27453 28458-28682 28764-28863 31423-31717 32555-32715 32956-33127 33269-33545 33919-34319 36103-38140
HPMFP38	825	575914	AL109797	6967	1-76 283-455



					1081-2096 2241-2468 2777-2914 3824-3881 4776-4998 5882-6048 7438-7572 8605-8867 8905-9483 9614-9744 10810-11422 12430-12580 12992-13311 14225-14405 15333-16218 18289-18454 18667-19008 19614-20375 20937-21074 21640-22086 22089-22333 22817-22951 25734-26162 26931-27125 27349-27454 28228-28352 28459-28683 28765-28864 31425-31718 32476-32792 32957-33128 33270-33546 33920-34321 35214-35796 36099-38136
HPMFP38	825	575914	AL109797	6968	1-108
HPMFP38	825	575914	AL109797	6969	1-112
HPMFS41	827	711640	Z95331	6970	1-438
HPMFS41	827	711640	Z95331	6971	1-83
HPMFT04	828	916662	AC016813	6972	1-324
HPMFT04	828	916662	AC016813	6973	1-213
HPMFU89	829	575894	AC022210	6974	1-350
HPMFU89	829	575894	AC022210	6975	1-17 420-840 1098-1343
HPMFV82	831	575911	AL160231	6976	1-560
HPMFV82	831	575911	AL160231	6977	1-708

HPMFV82	831	575911	AL160231	6978	1-521
HPMFW78	834	932529	AC012221	6979	1-535
HPMFW78	834	932529	AC012221	6980	1-617
HPMFX13	835	575908	AL050350	6981	1-1168
HPMFX13	835	575908	AL050350	6982	1-100
HPMFX65	836	867657	AL031282	6983	1-384
HPMFX65	836	867657	AL031282	6984	1-338
HPMFX65	836	867657	AL031282	6985	1-106
HPMFX70	837	577642	AL355303	6986	1-194 314-437 554-905 1348-2897
HPMFX70	837	577642	AC005383	6987	1-207 626-768 1716-1898 2187-2745 5326-5413 7250-7333 7857-7962 10837-11049 13284-13428 14141-14415 14983-15389 15403-15573 15659-16177 16352-16519 18351-18547 18667-18797 18907-19257 19618-20898 21036-22585
HPMFX70	837	577642	AL355303	6988	1-534
HPMFX70	837	577642	AC005383	6989	1-534
HPMGC23	842	703835	AC020907	6990	1-135 159-1252 1476-1903 2786-3156 4700-5283 6295-6413 7252-7356 7441-7616 7703-7789
HPMGC23	842	703835	AC020907	6991	1-201
HPMGE31	843	867648	AC009032	6992	1-426
HPMGE31	843	867648	AC010537	6993	1-424
HPMGE31	843	867648	AC009032	6994	1-99
HPMGE31	843	867648	AC009032	6995	1-233

HPMGE31	843	867648	AC010537	6996	1-162
HPMGE95	844	873392	AC018523	6997	1-1418 1445-3328
HPMGE95	844	873392	AC018523	6998	1-336
HPMGE95	844	873392	AC018523	6999	1-2444 2484-2659 2757-3196
HPMGF32	846	577615	AC006960	7000	1-349
HPMGF32	846	577615	AC008266	7001	1-351
HPMGH16	847	577641	AC026354	7002	1-412
HPMGH16	847	577641	AC060225	7003	1-412
HPMGH16	847	577641	AC060225	7004	1-67 2876-4493
HPMGH16	847	577641	AC026354	7005	1-1619
HPMGJ93	850	864040	AC024452	7006	1-340
HPMGJ93	850	864040	AC024452	7007	1-201
HPMGJ93	850	864040	AC024452	7008	1-184 727-1343
HPMGK37	851	575924	AC018458	7009	1-432
HPMGK37	851	575924	AC026202	7010	1-432
HPMGK37	851	575924	AC026164	7011	1-432
HPMGK37	851	575924	AC018821	7012	1-432
HPMGK37	851	575924	AC026202	7013	1-602
HPMGK37	851	575924	AC026164	7014	1-602
HPMGK37	851	575924	AC018821	7015	1-602
HPMGM33	854	854081	AL139128	7016	1-1034 1667-4615
HPMGM33	854	854081	AL355388	7017	1-79 566-783 904-1201 4573-4703 5038-5120 5447-5492 5543-5733 7057-8087 8125-8544 8570-8782 9084-9384 10191-10361 10724-10789 11224-11492 12498-12550 12578-13870 13968-14197 15423-15860 16293-16606 16737-17790

					18448-18541 18829-21371
HPMGM33	854	854081	AL356483	7018	1-1035 1668-4614
HPMGM33	854	854081	AL139128	7019	1-314
HPMGM33	854	854081	AL355388	7020	1-154 482-945
HPMGM33	854	854081	AL356483	7021	1-156 459-950 984-1425 1512-2292 2727-2831 2935-3193 3462-3591 3910-4153 5779-6160 6294-6711 6899-7110 7935-8034 8100-8383 9023-9448 10580-11838
HPMGM33	854	854081	AL355388	7022	1-439
HPMGM33	854	854081	AL356483	7023	1-314
HPMGS09	857	575951	AL136104	7024	1-124
HPMGS09	857	575951	AL136104	7025	1-1395
HPMGS09	857	575951	AL136104	7026	1-1459 1662-2293 2447-2939
HPMGT67	859	970815	AC026510	7027	1-472
HPMGT67	859	970815	AC011475	7028	1-282 1124-1308 1546-1804 1827-2190 2230-2278 2928-3041 3534-3792 5844-6161 8497-8748 9331-9380 10799-10874 10999-11084 12851-12954 13819-14099 14137-14220 14349-14465 14554-14614

					14705-14829
					14948-15030
					15120-15236
					15511-15622
					17054-17141
					17265-17558
					17590-18154
					18240-18344
					18509-18594
					19012-19140
					19156-19666
					19732-19835
					20721-20826
					20934-21008
					21073-21555
					22855-22984
					23820-24828
					24885-24945
					25448-25538
					25979-27641
					29246-29604
					30552-30715
					33941-34095
					34383-34495
HPMGT67	859	970815	AC011475	7029	1-1999
HPMGT67	859	970815	AC011475	7030	1-302
HPMGV12	860	968364	AL355172	7031	1-294
HPMGV12	860	968364	AL139117	7032	1-351
HPMGV12	860	968364	AC009892	7033	1-351
HPMGV12	860	968364	AL139117	7034	1-294
HPMGV12	860	968364	AC009892	7035	1-294
HPMGV15	861	582596	AC025175	7036	1-269
HPMGV15	861	582596	AC008792	7037	1-269
HPMGV15	861	582596	AC024571	7038	1-269
HPMGV15	861	582596	AC025175	7039	1-191
HPMGV15	861	582596	AC024571	7040	1-276
HPMHA80	865	970813	AC010097	7041	1-3752
HPMHA80	865	970813	AL162633	7042	1-3615
HPMHA80	865	970813	AL355073	7043	1-393
					610-3614
HPMHA80	865	970813	AC010097	7044	1-813
HPMHA80	865	970813	AL162633	7045	1-303
HPMHA80	865	970813	AL355073	7046	1-812
HPMHA80	865	970813	AL162633	7047	1-813
HPMHA80	865	970813	AL355073	7048	1-303
HPMHC74	868	577631	AL020990	7049	1-111
					8823-9073

					9156-9257 9325-9625 10063-10160 11212-11268 12867-12926 14379-14996 15086-15475 16330-16435 22187-22316 22890-22955 23988-24998 27029-27304 42968-43219
HPMHC74	868	577631	AL020990	7050	1-102
HPMHC74	868	577631	AL020990	7051	1-95
HPMHD66	869	928433	AL138976	7052	1-963
HPMHD66	869	928433	AL161669	7053	1-963
HPMHD66	869	928433	AL138976	7054	1-188
HPMHD66	869	928433	AL161669	7055	1-407
HPMJC01	871	914759	AC005484	7056	1-304
HPMJC01	871	914759	AC005484	7057	1-1308
HPMJC01	871	914759	AC005484	7058	1-615
HPMJC05	872	930844	AC006977	7059	1-442
HPMJC05	872	930844	AC006977	7060	1-832 960-1178 1319-1872
HPMJ88	873	930806	AC023991	7061	1-808
HPMJ88	873	930806	AC023991	7062	1-450
HPMJF76	875	965642	AC022895	7063	1-540
HPMJI81	876	930873	AC024077	7064	1-186 1433-2325 2647-2920 3296-3891 3988-4080 4970-5592 5628-5875 7059-7342 7610-9228 9250-10341 10502-13042 13065-13884 13886-14217 14240-15236 15301-15756 16091-16176 16422-17010 17039-17874

					18020-18491 18833-19353 19410-19966 21020-21557 22200-22259
HPMJ181	876	930873	AC005392	7065	1-348 659-2096 2271-2669 2824-3667 3888-4178 4322-5035 5652-6162 6409-6997 7026-7710 8011-8481
HPMJ181	876	930873	AC005337	7066	1-110 275-3654 3656-3945 4101-5543 5862-5946 6198-6781 6815-7548 7784-8246
HPMJ181	876	930873	AC004603	7067	1-353 499-1948 2094-3422 5084-5621 6279-6331
HPMJ181	876	930873	AC024077	7068	1-407
HPMJ181	876	930873	AC005392	7069	1-557
HPMJ181	876	930873	AC005392	7070	1-524
HPMJ181	876	930873	AC005337	7071	1-521
HPMJ181	876	930873	AC004603	7072	1-407
HPMJ181	876	930873	AC004603	7073	1-1485
HPMJN59	877	946876	AC011846	7074	1-137 1376-1529 3692-3832 4686-4797
HPMJV08	880	958001	AC027776	7075	1-524
HPMJV08	880	958001	AC011087	7076	1-531
HPMJV08	880	958001	AC011087	7077	1-313
HPMJV08	880	958001	AC011087	7078	1-858
HPMKB19	882	969478	AC068403	7079	1-803
HPMKB19	882	969478	AC006453	7080	1-806
HPMKB19	882	969478	AC068403	7081	1-1328
HPMKB19	882	969478	AC006453	7082	1-1333
HPMKI53	883	957997	AC023331	7083	1-126

					310-498 668-972 1409-1497 3701-4076
HPMKI53	883	957997	AL358236	7084	1-305
HPMKI53	883	957997	AL359374	7085	1-126 310-486 668-972 1409-1497 3704-4079
HPMKI53	883	957997	AC023331	7086	1-332
HPMKI53	883	957997	AL358236	7087	1-189
HPMKI53	883	957997	AL359374	7088	1-355
HPMKI53	883	957997	AL359374	7089	1-87
HPMKM81	884	894416	AC004774	7090	1-741 2632-2831 3934-4654
HPMKM81	884	894416	AC004774	7091	1-239
HPMLE04	886	867533	AC011374	7092	1-81 1539-1599 2994-3084 4479-4645 6408-7106 7597-8047 8608-8758 9415-9596 9701-10049 10092-10403 10435-10769 11974-12131 12474-14769
HPMLE04	886	867533	AC011374	7093	1-465
HPMLE04	886	867533	AC011374	7094	1-174
HPMLK02	887	918123	Z93244	7095	1-730
HPMLK02	887	918123	Z93244	7096	1-137
HPMLK02	887	918123	Z93244	7097	1-329
HPMLW10	890	963037	Z71183	7098	1-650 910-1011 1092-1374 1570-3575 4833-5148 5950-6339 6825-8772
HPMLW10	890	963037	Z71183	7099	1-370
HPMLW10	890	963037	Z71183	7100	1-547
HPMSF86	891	509490	AC073118	7101	1-332
HPMSF86	891	509490	AC073118	7102	1-416



HPRAU45	894	536630	AL358777	7103	1-228
HPRAU45	894	536630	AL358777	7104	1-130 421-904 1651-2220
HPRAZ10	895	968692	AP002391	7105	1-684
HPRAZ10	895	968692	AP001813	7106	1-684
HPRAZ10	895	968692	AP001354	7107	1-684
HPRAZ10	895	968692	AP001813	7108	1-801
HPRAZ10	895	968692	AP001354	7109	1-801
HPRAZ10	895	968692	AP002391	7110	1-812
HPRBA65	896	655537	AC005156	7111	1-75 210-244 676-737 1197-1292 2540-2624 3457-4334 5676-5802 6374-6668 7168-7566 8477-9182 9877-10179 10809-11521 11664-11764 12167-15152 15313-17601
HPRBA65	896	655537	AC005156	7112	1-384
HPRBL91	898	655693	AC027598	7113	1-287
HPRBL91	898	655693	AC002366	7114	1-1471 2332-2618 2700-3922
HPRBL91	898	655693	AC027598	7115	1-213
HPRBL91	898	655693	AC002366	7116	1-649
HPRCB11	899	960316	AC027430	7117	1-1109
HPRCB11	899	960316	AC025060	7118	1-1109
HPRCB11	899	960316	AL356216	7119	1-1109
HPRCB11	899	960316	AC027430	7120	1-283 1252-1520 3140-3531 3872-4195 5194-5332
HPRCB11	899	960316	AC025060	7121	1-325 1292-1560 3180-3571 3912-4235 5234-5372
HPRCB11	899	960316	AL356216	7122	1-165 983-1294

					2273-2541 4161-4552 4893-5211 6214-6352
HPRCB21	900	655725	AL359979	7123	1-462
HPRCB21	900	655725	AC007198	7124	1-38 1466-1583 3807-4268 5971-6192 8369-8478 8487-8559 8759-8854 10151-10561 10604-10767
HPRCB21	900	655725	AC007198	7125	1-375
HPRCN41	903	655554	AL118505	7126	1-340
HPRSB16	905	666295	AC025744	7127	1-600
HPRSB16	905	666295	AC009532	7128	1-600
HPRTL26	906	849081	AC023670	7129	1-494
HPRTL26	906	849081	AC006209	7130	1-494
HPRTL26	906	849081	AC023670	7131	1-421
HPRTL26	906	849081	AC023670	7132	1-143
HPRTL26	906	849081	AC006209	7133	1-421
HPRTL26	906	849081	AC006209	7134	1-316
HPVAB11	908	967944	AL132765	7135	1-317 513-1129 1393-1812 2172-2279 3387-3604 3756-4196 4605-5222 6088-7636 8449-9183
HPVAH36	911	525537	AC069506	7136	1-484
HPVAH36	911	525537	AC069506	7137	1-109
HPWAF85	912	655691	AC067852	7138	1-269 1060-1197 2413-2501 2742-2824 3029-3345 3516-3646 4050-5214
HPWAF85	912	655691	AC067852	7139	1-462
HPWAF85	912	655691	AC067852	7140	1-1449
HPWAH48	913	655527	AC021302	7141	1-771
HPWAH48	913	655527	AP002410	7142	1-771
HPWAH48	913	655527	AC027229	7143	1-771

HPWAH48	913	655527	AC021302	7144	1-577
HPWAH48	913	655527	AC027229	7145	1-577
HPWAS77	914	908450	AL360009	7146	1-899
HPWAS77	914	908450	AL360009	7147	1-439
HPWBA33	915	655733	AC011893	7148	1-218 363-880
HPWBA33	915	655733	AC008693	7149	1-475 551-760
HPWBA33	915	655733	AC008793	7150	1-218
HPWBO84	916	867289	AC019236	7151	1-123 882-1040 2914-3294 3442-3565 3817-3937
HPWCJ27	918	655614	AC013537	7152	1-478
HPWDA86	922	961529	AC025052	7153	1-252
HPWDA86	922	961529	AC007908	7154	1-423
HPWDA86	922	961529	AC060805	7155	1-509
HPWDA86	922	961529	AC073210	7156	1-508
HPWDA86	922	961529	AC024972	7157	1-602
HPWDA86	922	961529	AC016424	7158	1-424
HPWDA86	922	961529	AC026106	7159	1-204
HPWDA86	922	961529	AF254982	7160	1-201
HPWDA86	922	961529	AC006352	7161	1-1265 1916-2604 2661-3249 3978-4705 4940-6193 6404-6826 8773-10518 10889-11233 11898-12329 12356-12820 15993-16294 24465-25008 25659-25803 26371-27137 29043-29527 32143-32572 33008-33621 35141-35475 36748-37095 38180-38873 38879-39078 39939-40330 40474-41066 41075-41810

					41904-42646 43264-47127 47426-49777
HPWDA86	922	961529	AC002038	7162	1-203
HPWDA86	922	961529	AC002041	7163	1-423
HPWDA86	922	961529	AC007882	7164	1-423
HPWDA86	922	961529	AC025052	7165	1-352
HPWDA86	922	961529	AC007908	7166	1-1951
HPWDA86	922	961529	AC060805	7167	1-369
HPWDA86	922	961529	AC073210	7168	1-333
HPWDA86	922	961529	AC024972	7169	1-1002
HPWDA86	922	961529	AC060805	7170	1-1004 1014-1114
HPWDA86	922	961529	AC073210	7171	1-960
HPWDA86	922	961529	AC024972	7172	1-2119
HPWDA86	922	961529	AC016424	7173	1-1103
HPWDA86	922	961529	AC016424	7174	1-1003
HPWDA86	922	961529	AC026106	7175	1-426
HPWDA86	922	961529	AC006352	7176	1-661 844-1386
HPWDA86	922	961529	AF254982	7177	1-824 831-1109
HPWDA86	922	961529	AC006352	7178	1-247 320-743 1068-1252 1590-2004 2516-2705 3290-3582 3755-4299 4884-5079
HPWDA86	922	961529	AC002041	7179	1-1951
HPWDA86	922	961529	AC002038	7180	1-1110
HPWDA86	922	961529	AC002041	7181	1-959
HPWDA86	922	961529	AC007882	7182	1-1951
HPWDA86	922	961529	AC007882	7183	1-959
HPWDD72	923	537333	AC005189	7184	1-799
HPWDD72	923	537333	AC005189	7185	1-411
HPWDD72	923	537333	AC005189	7186	1-619
HPWSB35	924	655713	AC026075	7187	1-358 393-922
HPWSB35	924	655713	AC026075	7188	1-100
HPZAB38	925	655591	AC008954	7189	1-263
HPZAB38	925	655591	AC026707	7190	1-263
HPZAB38	925	655591	AC008971	7191	1-263
HPZAB38	925	655591	AC026707	7192	1-186
HPZAB38	925	655591	AC008971	7193	1-180

HSWAD39	927	705322	AC010076	7194	1-1083
HSWAD39	927	705322	AC010076	7195	1-625
HSWBD86	928	785439	AC009700	7196	1-859
HSWBD86	928	785439	AC051619	7197	1-143 2883-3799 3860-4084 4588-4731 4805-5240 5789-6236 6303-6916 7595-7957 10174-11092
HSWBD86	928	785439	AC009700	7198	1-1558 2105-2231 2334-2387
HSWBD86	928	785439	AC051619	7199	1-1558 2093-2219 2322-2375
HSWBD86	928	785439	AC051619	7200	1-155
HSWBJ40	929	711066	AC046165	7201	1-782
HSWBJ40	929	711066	AC034220	7202	1-782
HSWBJ40	929	711066	AC034220	7203	1-545 914-1407
HSWBJ40	929	711066	AC046165	7204	1-87 410-529 561-954
HSWBJ40	929	711066	AC034220	7205	1-168 3854-3951 6063-6447 7841-7908 8322-8502 8704-8877 9198-9318 9350-9743
HTEAD95	934	961232	AC006445	7206	1-1321
HTEAF26	936	537271	AC022988	7207	1-319
HTEAG50	937	787500	AC026462	7208	1-310
HTEAG50	937	787500	AC026462	7209	1-250
HTEAR84	941	783328	AL133353	7210	1-222 225-361 2796-2928 4044-4119 5719-5962 7512-7571 10952-11165 11840-11870 15055-15191

					17157-17497 18170-18193 19594-20180 20819-21289 21499-22434 22520-23934
HTEAR84	941	783328	AL133353	7211	1-200 456-609 5860-5998 6526-6629 8425-8724 9151-9625 12117-12252 15026-15571 15654-16121 16221-16852 19264-19592 21596-21794 22707-22795 23248-23407 23487-23890 25183-26429 26561-27890 28380-28908 28953-29430 29490-32385 32577-35455 36789-37427 37736-38206 38250-38308 38867-39048 39075-39236 39491-39811 39971-40302 40401-40871 41105-41186 41719-41801 43440-43567 43732-44141 44689-44855 46395-46619 47357-47643 47700-47887 48174-48294 48469-48728 50284-50469 52382-52845

HTEAR84	941	783328	AL133353	7212	1-445
HTEAV43	942	927010	AL365184	7213	1-577
HTEAZ54	944	793441	AC024644	7214	1-521
HTEAZ54	944	793441	AC008555	7215	1-797 1423-1942 2185-2716 2806-4251
HTEAZ54	944	793441	AC024644	7216	1-97
HTEBC74	945	887782	AC022247	7217	1-148 2458-2630
HTEBD35	946	967959	AC072024	7218	1-317
HTEBD35	946	967959	AL353796	7219	1-317
HTEBD35	946	967959	AL360172	7220	1-317
HTEBJ78	948	779265	AP001177	7221	1-1021 3487-4086 4668-5157 5193-5665 5913-7625
HTEBJ78	948	779265	AC016186	7222	1-1021
HTEBJ78	948	779265	AC016127	7223	1-1021 2300-2622 3488-4067
HTEBJ78	948	779265	AP001164	7224	1-1021 2463-2587 3494-4093 4675-5164 5200-5672 5920-7633
HTEBJ78	948	779265	AC023989	7225	1-1021 2300-2622 3488-4067
HTEBJ78	948	779265	AP001164	7226	1-340
HTEBJ78	948	779265	AC023989	7227	1-340
HTEBJ78	948	779265	AC016186	7228	1-340
HTEBJ78	948	779265	AC016127	7229	1-340
HTEBJ78	948	779265	AC023989	7230	1-490
HTEBX62	953	508150	AC068620	7231	1-584
HTEBX62	953	508150	AC068620	7232	1-2496 2639-3538
HTEBY15	955	526281	AL117259	7233	1-260
HTEBY41	957	711523	AL357093	7234	1-229
HTEBY41	957	711523	AL157736	7235	1-229
HTEBY41	957	711523	AL357093	7236	1-142
HTEBY41	957	711523	AL357093	7237	1-455
HTEBY41	957	711523	AL157736	7238	1-142
HTEBY41	957	711523	AL157736	7239	1-455

HTEBY61	958	967340	AC020663	7240	1-150 1916-2097 3254-3396 4731-5065 5605-5801 5830-6113 6544-6716 7594-8121 8494-8612 8752-9291 9401-9505 10308-10582 11826-11970 12379-12478 12796-13085 13942-14925
HTEBY61	958	967340	AC020663	7241	1-265
HTEBZ21	959	958381	AL390764	7242	1-101 236-1007 1038-1344 1353-1493 1641-1750 1837-2006 2542-2700 3557-3720 4326-9299 9617-10008 10623-11068 11238-11714 11800-11992 12001-12566 13314-15677 15882-16457 16614-17442 17850-18427 19713-19802
HTEBZ21	959	958381	AL135843	7243	1-32 1420-1543 2122-2266 2730-3022 3914-4068 4197-4968 4999-5305 5314-5454 5602-5711 5798-5967 6503-6661



					7518-7681 8287-13260 13578-13969 14584-15029 15199-15675 15761-15953 15962-16527 17275-19638 19843-20418 20575-21403
HTEBZ21	959	958381	AL136105	7244	1-576
HTEBZ21	959	958381	AL359921	7245	1-703 1021-1412 2027-2470 2640-3116 3202-3394 3403-3968 4716-7079 7284-7859 8016-8844 9252-9829 11115-11204
HTEBZ21	959	958381	AL136105	7246	1-32 1420-1543 2122-2266 2730-3022 3914-4068 4197-4968 4999-5305 5314-5454 5602-5711 5798-5967 6503-6661 7518-7681 8287-13260 13578-13969 14584-15029 15199-15675 15761-15953 15962-16527 17275-19638 19843-20418 20575-21403 21811-22388 23674-23763
HTEBZ21	959	958381	AL136105	7247	1-311
HTEBZ21	959	958381	AL390764	7248	1-287

HTEBZ21	959	958381	AL135843	7249	1-302
HTEBZ21	959	958381	AL136105	7250	1-1122
HTEBZ21	959	958381	AL359921	7251	1-347 661-1203 1533-2057 2287-2445 3335-3716 5741-6053
HTEBZ21	959	958381	AL136105	7252	1-347 661-1203 1533-2057 2287-2445 3335-3716 5729-6044
HTEBZ21	959	958381	AL136105	7253	1-302
HTECA16	961	764416	AC011726	7254	1-470
HTECA16	961	764416	AC022911	7255	1-470
HTECA16	961	764416	AC011726	7256	1-500
HTECA16	961	764416	AC022911	7257	1-500
HTECA51	964	708860	AL035450	7258	1-93 1880-3178
HTECA51	964	708860	AL035450	7259	1-105
HTECC13	967	971673	AC018638	7260	1-252 3348-3556 3720-3822 3877-4004 4927-5181 5226-5736
HTECC13	967	971673	AC018638	7261	1-130
HTECC37	969	508143	AC073270	7262	1-416
HTECC37	969	508143	AC022202	7263	1-416
HTECC80	972	796820	AC016767	7264	1-35 784-988 1186-1254 1854-2737
HTECC80	972	796820	AL353608	7265	1-140 1348-1579 1810-2502 2585-2694 2831-3054 3202-3273 3513-3903 4019-4053 4802-5008 5205-5273 5873-6756
HTECC80	972	796820	AL078621	7266	1-35

					784-988 1187-1255 1855-2739
HTECC80	972	796820	AC016767	7267	1-103
HTECC96	974	959874	AC025977	7268	1-1286
HTECC96	974	959874	AC040170	7269	1-1286
HTECC96	974	959874	AC013513	7270	1-1286
HTECD17	975	508108	AC013812	7271	1-700
HTECD17	975	508108	AL136360	7272	1-707
HTECD17	975	508108	AL132868	7273	1-712
HTECD17	975	508108	AL136360	7274	1-263
HTECD17	975	508108	AL132868	7275	1-1166
HTECD36	977	518124	AL132780	7276	1-562 736-1855 1931-2051 2232-2897 3495-3673 3759-3882 3968-4030 4121-4203 4369-4532 5620-6405 7007-7151 7615-7702 7882-8106 8655-8942
HTECD36	977	518124	AL132780	7277	1-1058 1452-2073
HTECE44	981	764830	AC026957	7278	1-198 2840-3137 3146-3524 3811-4890 6360-6479 7798-8125 13068-13250 14052-14252
HTECE44	981	764830	AC026957	7279	1-626 1734-2270
HTECE44	981	764830	AC026957	7280	1-514
HTECE91	984	522984	AC021586	7281	1-1460 4600-4966 5827-6179 6596-7246 8893-9973 9991-10696 10851-11246 11352-11783

					11934-12787 12926-13555
HTECE91	984	522984	AC021586	7282	1-310
HTECE91	984	522984	AC021586	7283	1-227
HTEDF13	985	522964	AL133499	7284	1-370
HTEDF13	985	522964	AP001579	7285	1-370
HTEDF13	985	522964	AL133499	7286	1-373
HTEDF13	985	522964	AP001579	7287	1-373
HTEDF76	988	522973	AC073612	7288	1-445
HTEDF76	988	522973	AC011601	7289	1-445
HTEDF76	988	522973	AC073612	7290	1-1099
HTEDF76	988	522973	AC011601	7291	1-1099
HTEDG16	989	925527	AC008547	7292	1-196 5138-6241
HTEDG16	989	925527	AC008547	7293	1-615
HTEDI82	996	536477	AL359455	7294	1-396 561-837 2703-2900 3015-3099
HTEDI82	996	536477	AL359455	7295	1-99 404-514 597-985
HTEDJ04	997	519940	AL359767	7296	1-363 411-960
HTEDJ04	997	519940	AL139377	7297	1-363 411-960
HTEDJ04	997	519940	AL359767	7298	1-1831
HTEDJ04	997	519940	AL359767	7299	1-430
HTEDJ04	997	519940	AL139377	7300	1-27 318-1304 2398-3171 3518-4027 4716-4919 6801-6956 9618-9892 9938-10400 10485-11629 14162-18670 18980-19880 20136-20686 21997-22089 23839-23999 24083-24175 25513-26022 27060-27487 27557-28168 28906-29445

					31090-31363 31403-31488 31669-33499
HTEDJ04	997	519940	AL139377	7301	1-430
HTEDJ30	998	771404	AC009871	7302	1-1510
HTEDJ30	998	771404	AC009812	7303	1-1510
HTEDJ30	998	771404	AC009871	7304	1-448
HTEDJ30	998	771404	AC009812	7305	1-555
HTEDM08	999	960303	AF215848	7306	1-170 294-404
HTEDM08	999	960303	AC009314	7307	1-171 295-405
HTEDM08	999	960303	AF215848	7308	1-317
HTEDM08	999	960303	AC009314	7309	1-319
HTEDO31	1000	870711	AC066613	7310	1-279
HTEDO31	1000	870711	AC021238	7311	1-279
HTEDO51	1001	530592	AL390816	7312	1-67 5510-5778
HTEDO59	1002	964379	AL050310	7313	1-421
HTEDO59	1002	964379	AL161442	7314	1-421
HTEDO59	1002	964379	AL050310	7315	1-860
HTEDO59	1002	964379	AL050310	7316	1-342
HTEDO59	1002	964379	AL161442	7317	1-518
HTEDO59	1002	964379	AL161442	7318	1-3019
HTEDP15	1003	870675	AC008119	7319	1-129 1226-2057 3894-4078 4353-5054 5261-6347 6614-7200 9168-9576 10127-10285 11014-11729 11817-12350 12430-12511 12645-12705 13644-13859 15181-15386 16010-16997 17664-18577 18904-19074 20351-20663 20725-20760 22661-23119 23379-23760 24351-24525 24708-25559

					25582-29154 29209-29484 29561-30822 31196-31337 31407-31850 31943-32302 33856-33927
HTEDP15	1003	870675	AC008119	7320	1-254
HTEDP31	1004	870548	AC004674	7321	1-660
HTEDP31	1004	870548	AC004674	7322	1-139
HTEDQ30	1007	530589	AC011181	7323	1-683
HTEDQ30	1007	530589	AC011181	7324	1-443
HTEDQ30	1007	530589	AC011181	7325	1-275
HTEDQ83	1009	530586	AC018935	7326	1-491
HTEDR71	1010	761585	AJ239328	7327	1-367 884-2043 2287-2859 4457-4512 4780-6360 9237-9407 10873-11661
HTEDR71	1010	761585	AP000219	7328	1-367 884-2043 2287-2859 4457-4512 4780-6360 9237-9407 10903-11691
HTEDR71	1010	761585	AP000341	7329	1-367 884-2043 2287-2859 4457-4512 4780-6360 9237-9407 10903-11691
HTEDR71	1010	761585	AJ239328	7330	1-241
HTEDR71	1010	761585	AP000219	7331	1-241
HTEDR71	1010	761585	AP000341	7332	1-241
HTEDU48	1013	932315	AC026083	7333	1-1222
HTEDU48	1013	932315	AC026083	7334	1-416
HTEDU48	1013	932315	AC026083	7335	1-442
HTEEA03	1020	925399	AC010934	7336	1-1173 1296-2904 2911-4546
HTEEA03	1020	925399	AC044879	7337	1-1173 1296-2905 2912-4547

HTEEA03	1020	925399	AC010934	7338	1-1008
HTEEA03	1020	925399	AC044879	7339	1-692
HTEEA03	1020	925399	AC010934	7340	1-692
HTEEA03	1020	925399	AC044879	7341	1-1008
HTEEE65	1024	530157	AC011830	7342	1-164 2053-2094 2375-2846
HTEEE65	1024	530157	AC018502	7343	1-164 2053-2094 2375-2846
HTEEE65	1024	530157	AC018499	7344	1-164 2053-2094 2375-2846
HTEEE65	1024	530157	AC018502	7345	1-2058
HTEEU23	1027	524059	AL355801	7346	1-359 3545-3632 6187-6329 7609-7687
HTEEU23	1027	524059	AL355801	7347	1-939 1454-1932 2912-3240 3284-3953
HTEEW73	1032	917206	AL355377	7348	1-83 578-621 1159-1219 2182-2285 2508-2616 6024-6598
HTEFJ53	1034	935982	AC019031	7349	1-710
HTEFJ53	1034	935982	AC019031	7350	1-405
HTEFO32	1037	529272	AL133264	7351	1-190 1330-1629 2351-5250 5255-5600 5635-9271 9938-10152 10897-11597 11951-12840 13095-13296 13340-13626 13704-14430 14536-14639 15282-15909 16437-16561 18269-18449 20662-21446 21484-22073

HTEFO76	1038	770270	AC055733	7352	1-160 888-1009 1771-2022
HTEFO76	1038	770270	AC025148	7353	1-322 946-1105 1827-1948 2710-2961
HTEFO76	1038	770270	AC025148	7354	1-924 1228-1751 1793-2057 2224-2959 3239-3297 4754-4965 5736-6035 8675-9217 10252-11580 11720-11844 12753-13021
HTEFS60	1042	836010	Z84469	7355	1-640
HTEFW55	1044	787550	AL138975	7356	1-703
HTEFW55	1044	787550	AC011190	7357	1-703
HTEFW55	1044	787550	AL162171	7358	1-118 600-642 4987-5103 8034-8072 8978-9174 9525-9958 10048-10357 10648-11468 11642-12760 12786-12888 13913-14249 14931-15063 15738-16168 16205-16345 17103-17538 20097-20865 21389-21912 24378-24502 24644-25083 27767-28008 28873-29360 31358-32060 36985-37295 38992-39029 39774-40017 44189-44310



					44400-44530 46199-46350 46476-46750 47107-47593 47781-48000 48185-48492 48689-50784
HTEFW55	1044	787550	AL162171	7359	1-1502
HTEFW55	1044	787550	AL162171	7360	1-294 309-744
HTEFX53	1047	842047	AC019054	7361	1-1177
HTEFX53	1047	842047	AC019054	7362	1-272
HTEGA13	1048	656077	AC016366	7363	1-124 250-1075 1645-1784 3488-3903 4325-4378 5000-5066 5729-5862
HTEGA13	1048	656077	AC005237	7364	1-129 864-968 2110-2704 2874-3374 3897-4026 4152-4977 5547-5686 7392-7807 8227-8285 8903-8970 9633-9766 10230-10642 10754-10917 13200-13823 15685-15784 16202-16302 16342-16496 16754-16865 17467-17820 20203-20289 25130-25260 26385-26486 28046-28566 28884-28989 30114-30820 33068-33452
HTEGA13	1048	656077	AC005237	7365	1-592
HTEGF95	1055	796660	AC023097	7366	1-1019

					1110-1237 1879-2520 2630-2722 2971-3623 3632-3799 4789-5451 5681-5917 6015-6176 7511-7632 7814-8250 9336-9535 9998-11067 12025-12474 14608-14706 15489-15605 16481-16607
HTEGF95	1055	796660	AC023097	7367	1-600
HTEGF95	1055	796660	AC023097	7368	1-388
HTEGG07	1056	954115	AC011842	7369	1-486
HTEGG07	1056	954115	AC011842	7370	1-606
HTEGG61	1057	528007	AC009220	7371	1-627
HTEGG61	1057	528007	AC009220	7372	1-303
HTEGG61	1057	528007	AC009220	7373	1-123
HTEGK51	1058	520046	AC008555	7374	1-797 1423-1942 2185-2716 2806-4251
HTEGU13	1071	520041	AC036208	7375	1-388 3367-3638 4217-4390 4594-4868 6530-6680 7892-7971 9392-9567 10136-10429
HTEGU13	1071	520041	AC036208	7376	1-156
HTEGU62	1073	573885	AC036238	7377	1-402
HTEGU62	1073	573885	AC036238	7378	1-256
HTEGU62	1073	573885	AC036238	7379	1-150
HTEGU93	1074	764831	AC026957	7380	1-198 2840-3137 3146-3524 3811-4890 6360-6479 7798-8125 13068-13250 14052-14252

HTEGU93	1074	764831	AC026957	7381	1-626 1734-2270
HTEGU93	1074	764831	AC026957	7382	1-514
HTEGV60	1076	822954	AC013414	7383	1-138 550-714 2702-3122 3973-4262 4649-4745 5363-7228
HTEGV60	1076	822954	AC016171	7384	1-127 1017-1306 1693-1789 2407-5049
HTEGV60	1076	822954	AC016171	7385	1-4710
HTEGV84	1077	870240	AC027120	7386	1-1730
HTEGV84	1077	870240	AC023877	7387	1-1730
HTEGV84	1077	870240	AC027120	7388	1-85
HTEGV84	1077	870240	AC023877	7389	1-85
HTEGW41	1078	573880	AL135939	7390	1-541
HTEGW94	1079	794350	AC022672	7391	1-1334 1951-2103
HTEGW94	1079	794350	AC022672	7392	1-5446
HTEGX74	1080	783829	AC027396	7393	1-95 227-318 546-654 669-792 1355-1766
HTEGX74	1080	783829	AC027396	7394	1-1730
HTEGY01	1081	917214	AC009061	7395	1-123 4295-4489 5148-5404 5536-5632
HTEGY01	1081	917214	AC009061	7396	1-101
HTEHB07	1083	870707	AC020575	7397	1-625 1178-1625
HTEHB07	1083	870707	AC027000	7398	1-625 1177-1624
HTEHC60	1086	965998	AC007343	7399	1-695
HTEHC60	1086	965998	AC018553	7400	1-695
HTEHC60	1086	965998	AC007343	7401	1-494
HTEHC60	1086	965998	AC018553	7402	1-494
HTEHE60	1088	795264	AC007114	7403	1-738
HTEHE60	1088	795264	AC007114	7404	1-359
HTEHE78	1090	932312	AC022621	7405	1-419
HTEHE78	1090	932312	AC022621	7406	1-634
HTEHE78	1090	932312	AC022621	7407	1-398
HTEHF66	1093	836999	AL109657	7408	1-67

					611-694 1472-1552 7387-7447 7998-8086 10739-10859
HTEH93	1099	870629	AL121926	7409	1-402
HTEHX32	1122	772643	AL049742	7410	1-694
HTEIA80	1126	721831	AC021473	7411	1-258
HTEIA80	1126	721831	AC016310	7412	1-257
HTEIA80	1126	721831	AC021473	7413	1-114
HTEIA80	1126	721831	AC016310	7414	1-114
HTEIB14	1127	963099	AC016877	7415	1-369 817-2106 2511-2860 4380-5157 6201-6321 7064-7649 11036-11360
HTEIB14	1127	963099	AC016877	7416	1-139
HTEIF40	1128	958355	AL157687	7417	1-40 249-903 1489-1913 2058-2116 2558-2733 2737-2876 3462-3623 5522-5820 5917-6004
HTEIF40	1128	958355	AL161668	7418	1-40 249-903 1489-1913 2058-2116 2558-2892 3479-3633 5532-5830 5927-6014
HTEIF40	1128	958355	AL157687	7419	1-307
HTEIF40	1128	958355	AL161668	7420	1-307
HTEIF68	1129	573828	AP001887	7421	1-311
HTEIF68	1129	573828	AP002008	7422	1-311
HTEIF68	1129	573828	AP001887	7423	1-107
HTEIF68	1129	573828	AP002008	7424	1-357
HTEIF68	1129	573828	AP001887	7425	1-357
HTEIF68	1129	573828	AP002008	7426	1-107
HTEIH70	1131	573826	AC020908	7427	1-85 759-1469 2611-2787

					3133-3229 3908-3972 4076-4239 5908-6009 6780-6924 8969-9104 9180-9480 9730-10047 10173-10906 12607-13024
HTEIH70	1131	573826	AC020908	7428	1-183
HTEIK11	1136	967431	AC018924	7429	1-215 1942-2409 3011-3645 4383-5366
HTEIK11	1136	967431	AC018924	7430	1-927
HTEIK90	1138	789121	AL161442	7431	1-380
HTEIK90	1138	789121	AL161442	7432	1-185 1241-1480 3780-4356 5514-5666 6203-6495 6752-7126 7461-7946 10053-10148 10892-10967 12645-13553
HTEIK90	1138	789121	AL161442	7433	1-323
HTEIL48	1140	523681	AC026861	7434	1-38 601-692 1658-1810 2194-2275
HTEIO02	1145	920622	AC010632	7435	1-38 1512-1878 2899-2944 3751-4080
HTEIO02	1145	920622	AC010632	7436	1-523
HTEIO02	1145	920622	AC010632	7437	1-394
HTEIO28	1147	573803	AC067839	7438	1-489
HTEIO28	1147	573803	AC007898	7439	1-489
HTEIO28	1147	573803	AL359508	7440	1-346
HTEIP88	1148	941155	AC068659	7441	1-51 583-821 4529-4916 5879-6079 6298-6442 7345-7447

					7836-8136 8423-8833 12525-12677 13528-13727 14268-14602 14605-14655 15410-15666 17282-18408
HTEIP88	1148	941155	AC012183	7442	1-51 583-821 4528-4915 5878-6078 6297-6441 7344-7446 7835-8135 8422-8832 12525-12677 13529-13728 14269-14603 14606-14656 15410-15666 17282-18408
HTEIP88	1148	941155	AC068659	7443	1-482
HTEIP88	1148	941155	AC012183	7444	1-482
HTEIP88	1148	941155	AC068659	7445	1-1254
HTEIP88	1148	941155	AC012183	7446	1-1254
HTEIP92	1149	523892	AC013252	7447	1-368
HTEIP92	1149	523892	AC013252	7448	1-952
HTEIP92	1149	523892	AC013252	7449	1-413
HTEIQ74	1150	765794	AC055815	7450	1-681
HTEIQ74	1150	765794	AC026801	7451	1-681
HTEIQ74	1150	765794	AC008690	7452	1-681
HTEIQ74	1150	765794	AC055815	7453	1-435
HTEIQ74	1150	765794	AC026801	7454	1-435
HTEIQ74	1150	765794	AC008690	7455	1-435
HTEIR33	1151	928058	AL139130	7456	1-164 346-423 545-673 1188-1349 3339-3655 4129-4219 6133-6265 8323-8553
HTEIR33	1151	928058	AL139130	7457	1-196 418-529 695-927 1596-1660

					1751-1803 2056-2085 2710-2770 3176-4018 5037-5258
HTEIU75	1153	779163	AL390863	7458	1-51 469-1032
HTEIU75	1153	779163	AL136370	7459	1-51 469-1032
HTEIV86	1156	784657	AC021467	7460	1-44 1339-1503 2150-2290 3993-4708
HTEIV86	1156	784657	AC009761	7461	1-112 759-899 2602-3318
HTEIX28	1159	836011	AL356489	7462	1-445 884-998 1226-3051
HTEIX28	1159	836011	AL356489	7463	1-446 885-999 1227-1523 1744-2100 2129-2588 2592-3047
HTEIX28	1159	836011	AL139008	7464	1-446 885-999 1227-1523 1744-2100 2129-2588 2592-3047
HTEIX28	1159	836011	AL356489	7465	1-220
HTEIX28	1159	836011	AL356489	7466	1-1564
HTEIX28	1159	836011	AL356489	7467	1-671 1240-1821 2574-3013
HTEIX28	1159	836011	AL139008	7468	1-1564
HTEIX28	1159	836011	AL139008	7469	1-671 1240-1821 2574-3013
HTEIX85	1160	864251	AL161614	7470	1-2924 3023-4030 5001-5171 7210-7434 7618-7734 9610-9764 10165-10247

					11951-12426 12489-12966 12976-14097 14682-14894 15043-15480 15790-16240 18111-18240 19064-19538 21727-21871 22803-22927
HTEIY52	1161	963536	AC067940	7471	1-358
HTEIY52	1161	963536	AC067940	7472	1-304
HTEIY69	1162	577783	AC013615	7473	1-1089
HTEIY69	1162	577783	AC019281	7474	1-1089
HTEIY69	1162	577783	AC013615	7475	1-386
HTEIY69	1162	577783	AC019281	7476	1-386
HTEJB81	1167	870644	AC005230	7477	1-2439 8407-8470 9530-10042 10151-10292 10994-11489 13344-13495 13839-13947 14210-14368 14468-14896 15070-15109 16186-16476 24845-25151 28921-29859 29894-29983 30274-30383 30713-30861 35512-35834 36301-36697 38147-38284 39209-39428 40566-40976 42730-43452 44036-44488 45502-45786 46083-46155 46163-46724
HTEJB81	1167	870644	AC005230	7478	1-395
HTEJB81	1167	870644	AC005230	7479	1-400
HTEJC28	1168	573774	AL358214	7480	1-298
HTEJE15	1170	908360	AC016632	7481	1-220 361-469



					1509-2194
HTEJE15	1170	908360	AC016639	7482	1-220 362-470 1510-2195
HTEJE15	1170	908360	AC008914	7483	1-220 361-469 1512-2197
HTEJG24	1173	526278	AL139237	7484	1-430
HTEJG24	1173	526278	AC025004	7485	1-430
HTEJG24	1173	526278	AC021540	7486	1-430
HTEJJ43	1174	774243	AC018519	7487	1-214 309-383 1911-2211 2693-2983 3679-4166 4899-4949 9474-9544
HTEJJ43	1174	774243	AC018519	7488	1-611
HTEJM56	1176	952255	AC025036	7489	1-148
HTEJM56	1176	952255	AC027300	7490	1-158
HTEJM56	1176	952255	AC016327	7491	1-165
HTEJM56	1176	952255	AC016327	7492	1-195
HTEJN49	1178	558383	AL354888	7493	1-250
HTEJN49	1178	558383	AC067884	7494	1-250
HTEJN49	1178	558383	AL033527	7495	1-250
HTEJN49	1178	558383	AL354888	7496	1-391
HTEJN49	1178	558383	AC067884	7497	1-391
HTEJN49	1178	558383	AL033527	7498	1-392
HTEJT37	1183	530596	AC011318	7499	1-170 4244-4812
HTEJT37	1183	530596	AC027296	7500	1-404
HTEJT37	1183	530596	AC012340	7501	1-404
HTEJX78	1187	806395	AL136373	7502	1-131 694-1754
HTEJX78	1187	806395	AL357392	7503	1-112 675-1735
HTEJX78	1187	806395	AC013593	7504	1-131 694-1754
HTEJX78	1187	806395	AL357392	7505	1-3661 5981-6371 6517-7301 8141-8268 9332-9897 11527-11603 11625-11713 13194-13546 14430-14533

					16668-16939
HTEJX78	1187	806395	AL136373	7506	1-217
HTEJX78	1187	806395	AC013593	7507	1-3662 5982-6372 6518-7302 8142-8269 9333-9446 9450-9898 11528-11604 11626-11714 13195-13547 14428-14534 16669-16940 18704-20067 20193-20457 20794-22689
HTEKC07	1191	920925	AL359708	7508	1-546
HTEKC07	1191	920925	AL139318	7509	1-546
HTEKD04	1193	519938	AC026525	7510	1-1001 1500-1654 1958-2325
HTEKF35	1199	573749	AC016878	7511	1-152 2683-2792
HTEKF35	1199	573749	AC023911	7512	1-152 2683-2792
HTEKF35	1199	573749	AC011272	7513	1-152 2681-2790
HTEKF35	1199	573749	AC023911	7514	1-128
HTEKF35	1199	573749	AC011272	7515	1-128
HTEKF68	1200	772997	AL357117	7516	1-634
HTEKF68	1200	772997	AC023219	7517	1-634
HTEKI70	1202	503039	AC009648	7518	1-230 1002-1211 1349-1470 2451-2575 2924-3218 3509-3805
HTEKI70	1202	503039	AC009648	7519	1-103 188-274 326-447 2665-2749 3400-4013
HTEKO49	1205	723148	AC021527	7520	1-159 330-389 747-1508 1628-1889 2484-3286

HTEKO49	1205	723148	AC006211	7521	1-159 330-389 747-1508 1628-1889 2484-3286
HTEKO49	1205	723148	AC021527	7522	1-233
HTEKO49	1205	723148	AC006211	7523	1-233
HTEKQ26	1206	870627	AC069404	7524	1-343
HTEKQ85	1207	784444	AP000879	7525	1-39 770-842 2822-3250 3862-4296
HTEKQ85	1207	784444	AP000879	7526	1-355
HTEKS20	1210	846714	AL137023	7527	1-1052
HTEKS20	1210	846714	AL137023	7528	1-868 1143-1650
HTEKS76	1212	767658	AC073366	7529	1-121 756-1172
HTEKS76	1212	767658	AC012683	7530	1-121 756-1172
HTEKS76	1212	767658	AC069546	7531	1-121 756-1172
HTEKX06	1213	935945	AC020603	7532	1-434
HTEKX06	1213	935945	AC020603	7533	1-89
HTEKX08	1214	959876	AC064835	7534	1-2215
HTEKX28	1215	920927	AC027120	7535	1-1730
HTEKX28	1215	920927	AC069399	7536	1-1153
HTEKX28	1215	920927	AC023877	7537	1-1730
HTEKX28	1215	920927	AC027120	7538	1-85
HTEKX28	1215	920927	AC023877	7539	1-85
HTEKZ50	1217	524054	AC008552	7540	1-424
HTEKZ50	1217	524054	AC008385	7541	1-424
HTEKZ50	1217	524054	AC008385	7542	1-435
HTELD47	1219	934272	AC017113	7543	1-883 888-1012 1959-2108 2538-3546 5010-5154 6554-6734
HTELD47	1219	934272	AL109804	7544	1-885 890-1014 1960-2109 2553-3562 5027-5172 6576-6756
HTELD47	1219	934272	AC017113	7545	1-1019
HTELD47	1219	934272	AL109804	7546	1-493

					810-1071 1154-2175
HTELG47	1223	757740	AC024231	7547	1-377 458-535
HTELG47	1223	757740	AC016891	7548	1-377 458-535
HTELG47	1223	757740	AC024231	7549	1-533
HTELG47	1223	757740	AC016891	7550	1-533
HTELG57	1224	870621	AL356494	7551	1-2375 2863-3250 3804-3987
HTELG57	1224	870621	AL353662	7552	1-2375 2863-3250 3804-3987
HTELG57	1224	870621	AL356494	7553	1-538
HTELG57	1224	870621	AL356494	7554	1-85 637-1181
HTELG57	1224	870621	AL353662	7555	1-538
HTELG57	1224	870621	AL353662	7556	1-85 637-1181
HTELH44	1226	766462	AC006480	7557	1-266 1371-2150
HTELH44	1226	766462	AC006480	7558	1-369
HTELI03	1227	923071	AC068698	7559	1-587
HTELI03	1227	923071	AC005157	7560	1-587
HTELI03	1227	923071	AC068698	7561	1-276
HTELI03	1227	923071	AC068698	7562	1-427
HTELI03	1227	923071	AC005157	7563	1-427
HTELI03	1227	923071	AC005157	7564	1-273
HTELJ89	1229	966134	AL023585	7565	1-117 211-466
HTELJ89	1229	966134	AC024690	7566	1-123 217-474
HTELJ89	1229	966134	AL358783	7567	1-123 217-474
HTELJ89	1229	966134	AL023585	7568	1-122 217-474
HTELJ89	1229	966134	AL022101	7569	1-123 217-474
HTELK14	1230	794339	Z99716	7570	1-56 2209-2313 3622-3727 3907-4268 5968-6088 6723-7099
HTELK14	1230	794339	Z99716	7571	1-291
HTELK14	1230	794339	Z99716	7572	1-100

					161-616 2777-2861 3555-3660 5314-5769
HTELK50	1231	870552	AC025953	7573	1-75 1003-1162
HTELK50	1231	870552	AL355516	7574	1-77 1002-1161
HTELK50	1231	870552	AC015873	7575	1-77 1002-1161
HTELK68	1232	923055	AL110504	7576	1-658
HTELK68	1232	923055	AL110504	7577	1-346
HTELK68	1232	923055	AL110504	7578	1-420
HTELL48	1233	783824	AC027195	7579	1-649
HTELL48	1233	783824	AC027195	7580	1-105
HTELL48	1233	783824	AC027195	7581	1-729
HTELO20	1237	926910	AL031597	7582	1-346 524-615
HTELO73	1239	761806	AL078613	7583	1-96 242-666
HTELO93	1240	934344	AC012391	7584	1-400
HTELO93	1240	934344	AC023283	7585	1-270
HTELO93	1240	934344	AC012308	7586	1-400
HTELO93	1240	934344	AC023283	7587	1-314 1245-1274
HTELO93	1240	934344	AC012308	7588	1-317
HTELO93	1240	934344	AC012308	7589	1-235
HTELQ87	1243	761768	AC024958	7590	1-404 2868-3192
HTELQ87	1243	761768	AC018422	7591	1-404 2868-3192
HTELT72	1245	761598	AC011237	7592	1-633 697-899 1405-1529 1983-2165 2371-2490 4239-4353 6793-6880 6993-8390 8442-8767 9115-9434
HTELT72	1245	761598	AF214633	7593	1-633 697-899 1405-1529 1983-2165 2371-2490 4239-4353

					6793-6880 6993-8387 8439-8764 9112-9431
HTELT72	1245	761598	AC011237	7594	1-2683 2788-2900 3022-3162 3429-3503 3651-3777 4664-5070 5348-5888 6053-6296 6742-6875 7101-7249 7462-8011 8400-9118 9860-10566 10670-11294
HTELT72	1245	761598	AF214633	7595	1-2685 2790-2902 3024-3164 3431-3505 3653-3779 4666-5072 5351-5891 6056-6299 6745-6878 7104-7252 7465-8014 8403-9121 9863-10569 10673-11487 12212-12665 12994-13576 14033-14265 14998-15123
HTELT72	1245	761598	AC011237	7596	1-367
HTELT72	1245	761598	AF214633	7597	1-367
HTELU01	1247	915339	AL033517	7598	1-375
HTELV10	1249	963576	AC010339	7599	1-256
HTELV10	1249	963576	AC008674	7600	1-256
HTELV10	1249	963576	AC008674	7601	1-95
HTELV29	1253	952241	AC009131	7602	1-780
HTELV29	1253	952241	AC009131	7603	1-246
HTELV29	1253	952241	AC009131	7604	1-270
HTELV52	1255	963506	AL390858	7605	1-70 733-1332

HTELX52	1255	963506	AC026025	7606	1-70 733-1332
HTELX52	1255	963506	AL390858	7607	1-457
HTELX52	1255	963506	AC026025	7608	1-457
HTELX72	1256	761599	AC009682	7609	1-263
HTELX72	1256	761599	AL358940	7610	1-263
HTELY64	1257	764834	AL356056	7611	1-445
HTELY64	1257	764834	AL136982	7612	1-445
HTELY64	1257	764834	AL356056	7613	1-328
HTELY64	1257	764834	AL356056	7614	1-371
HTELY64	1257	764834	AL136982	7615	1-78 179-861
HTELY64	1257	764834	AL136982	7616	1-371
HTEMA54	1260	911666	AL359692	7617	1-1487
HTEMB26	1261	827055	AC004900	7618	1-112
HTEMB26	1261	827055	AC004900	7619	1-2372 2882-2974 3048-3578 4547-4806 5624-6285 7400-7547 10800-11164 11907-12010 16372-16542 17325-17552 19368-19662 22876-23302 28256-28683 31524-31990 35872-36237 36287-36728 37997-38535 38707-38829 39160-39466 40178-40339 40353-40480 40782-41520 42009-42538
HTEMB26	1261	827055	AC004900	7620	1-1968
HTEMB34	1263	870589	AL354940	7621	1-649
HTEMB34	1263	870589	AL157708	7622	1-649
HTEMB34	1263	870589	AL359554	7623	1-649
HTEMB83	1265	775593	AL050341	7624	1-294 621-1371 3345-3753
HTEMC75	1267	848193	AC074117	7625	1-93 317-475

					850-1162 1511-2098 2194-4316 4373-4717 4836-5053 5192-5313 5403-5497 5798-6033 6121-6210 6370-6841 7244-7310 7582-7935 8489-8606 9212-9266
HTEMC75	1267	848193	AC074117	7626	1-70 485-599 880-966 1279-1414 2072-2489 3066-3209 3281-4159 4400-4694 4931-6271
HTEMD10	1268	963546	AC005858	7627	1-655
HTEMJ34	1271	786377	AC021491	7628	1-124 290-781 1447-1562 1650-1767 2309-2417 3273-3466 3935-4120 5213-5358 6216-6605 7621-7744 8491-8761 9044-9175 9353-9523 9966-10843 11395-11839
HTEMJ34	1271	786377	AC021491	7629	1-228 3662-4225
HTEMJ54	1272	963531	AC026334	7630	1-1272 1874-2420 4782-5167 5373-5502 5508-5671 5752-6010



					6478-6836 7094-7292 7526-8820 9237-9731
HTEMJ54	1272	963531	AC060226	7631	1-1272
HTEMJ54	1272	963531	AC060226	7632	1-547
HTEMJ54	1272	963531	AC026334	7633	1-424
HTEMJ54	1272	963531	AC060226	7634	1-424
HTEMN08	1275	958374	AP001016	7635	1-248
HTEMN08	1275	958374	AC011077	7636	1-248
HTEMN08	1275	958374	AP002381	7637	1-248
HTEMN08	1275	958374	AC011077	7638	1-339
HTEMN08	1275	958374	AP001016	7639	1-339
HTEMN08	1275	958374	AP002381	7640	1-339
HTEMN95	1276	789113	AC005540	7641	1-157 1565-1735
HTEMP48	1279	767863	AL121747	7642	1-181 315-683 1416-1776 1804-2673 2940-3611 3880-4030 4596-4924 5925-6032 6514-6965 7032-7135 7196-7771 8229-8385 9347-9435 11732-13123
HTEMP48	1279	767863	AL049761	7643	1-573 2229-2431 2486-2797 3011-3299 3434-3924 4487-4614 5864-6151 6385-6768 6786-7099 7437-7594 7761-8029 8318-9645 9767-10324 10882-10944 11032-11505 12853-13033 13167-13535

					14268-14627 14656-15525 15792-16463 16731-16911 17448-17776 18777-18886 19366-19817 19884-19987 20048-20606 21085-21248 22199-22289 24584-25975
HTEMP48	1279	767863	AL121747	7644	1-1738
HTEMP48	1279	767863	AL049761	7645	1-1738
HTEMP48	1279	767863	AL049761	7646	1-267
HTEMP49	1280	932319	AC005848	7647	1-50 276-606 3099-3179 3390-3458 4162-4388
HTEMR65	1281	909280	AC010547	7648	1-1542
HTEMU17	1286	789623	AL159141	7649	1-210 345-515 4335-4446 9330-9443 9841-9904 11140-12334 12776-13144 13501-13916 17369-18981
HTEMU17	1286	789623	AL118559	7650	1-369
HTEMU17	1286	789623	AL159141	7651	1-318
HTEMU17	1286	789623	AL118559	7652	1-416
HTEMU17	1286	789623	AL118559	7653	1-231
HTEMZ04	1290	927021	AC068707	7654	1-102 574-851
HTEMZ04	1290	927021	AC068707	7655	1-202
HTENB03	1292	923050	AL157814	7656	1-490
HTENB03	1292	923050	AL157814	7657	1-30 1784-1887 2320-2867
HTENB03	1292	923050	AL157814	7658	1-550
HTENC22	1293	775544	AC069539	7659	1-890 999-1314 1794-4625
HTENC22	1293	775544	AC069539	7660	1-416
HTENC22	1293	775544	AC069539	7661	1-129

HTENF08	1294	958378	AC018682	7662	1-752
HTENF08	1294	958378	AC018682	7663	1-252
HTENI58	1299	917213	AL121980	7664	1-716
HTENI58	1299	917213	AL121980	7665	1-179 373-573
HTENK69	1303	844557	AC063919	7666	1-696 1146-1317 1506-1768
HTENK69	1303	844557	AC073439	7667	1-696 1146-1317 1506-1768
HTENO50	1305	969213	AC009874	7668	1-315 1284-1411 1668-1749 3993-4056 4183-4346 5547-6161 6198-6612 6660-6806 7328-7394 7459-7881 8005-8503 8700-8977 9207-9362 10056-10514 12312-12436
HTENO50	1305	969213	AC009874	7669	1-1809 1985-2077 2851-7606
HTENP80	1307	775387	AL035453	7670	1-408 4407-4511
HTENP80	1307	775387	AL035453	7671	1-342
HTENQ05	1308	928244	AC024952	7672	1-126 1960-2212 2845-2947 6326-6450 9966-10000 12088-12311 13031-13145 13786-13869 14356-14874
HTENQ05	1308	928244	AC018638	7673	1-123 666-828 4839-5113 6402-6995 7727-7910 9744-9996

					10630-10732 14112-14236 17737-17771 19858-20081 20801-20915 21556-21640 22127-22645
HTENQ05	1308	928244	AC024952	7674	1-368
HTENQ05	1308	928244	AC018638	7675	1-368
HTENQ05	1308	928244	AC018638	7676	1-374
HTENS22	1312	785996	AP001034	7677	1-964 1560-2151
HTENS22	1312	785996	AC015840	7678	1-965 1070-1278 1561-2152
HTENS22	1312	785996	AC015840	7679	1-422
HTENS43	1313	784936	AC011959	7680	1-189 439-1562
HTENS43	1313	784936	AF131216	7681	1-188 440-1562
HTENS91	1314	870515	AC016771	7682	1-688
HTENS91	1314	870515	AC048382	7683	1-1000
HTENS91	1314	870515	AC016771	7684	1-53 468-636 1619-1744 2423-2651 2790-3043 4364-4636 7345-7727
HTENS91	1314	870515	AC048382	7685	1-255
HTENX77	1317	771409	AP000484	7686	1-1719
HTENX77	1317	771409	AP000484	7687	1-255
HTENX77	1317	771409	AP000484	7688	1-103 2060-2420 4856-5151
HTENY35	1319	884043	AC006208	7689	1-1385 1465-3044 3323-3377 3821-3917 4057-4165 4748-4778 4805-5177 5224-5464 5956-6173 6207-7085 8138-8296 8758-9056

					9162-9263 9638-9764 10225-10392 10853-11247 11548-12281 12417-12970
HTENY35	1319	884043	AC006208	7690	1-1425 1603-1678 1783-1875 2028-3154 3258-3740 3768-4488 4764-4913 5252-5382 5827-5905 6172-6319 6397-6466 6957-7076 7473-7606 8554-8608 8714-8741 8840-8984
HTEOF91	1329	918571	AL133387	7691	1-1187
HTEOF91	1329	918571	AL135794	7692	1-1189
HTEOF91	1329	918571	AL133387	7693	1-47 231-264 355-857
HTEOF91	1329	918571	AL135794	7694	1-146
HTEOF91	1329	918571	AL133387	7695	1-140
HTEOF91	1329	918571	AL135794	7696	1-47 231-264 355-857
HTEOK02	1332	918590	AL136084	7697	1-486
HTEOK02	1332	918590	AL136084	7698	1-181 2911-3377
HTEON67	1334	954114	AC004533	7699	1-347
HTEOU45	1335	915138	AC016309	7700	1-708
HTEOU45	1335	915138	AC016309	7701	1-1634
HTEOV90	1336	870532	AL359092	7702	1-116
HTEOV90	1336	870532	AC009453	7703	1-143
HTEOV90	1336	870532	AC025036	7704	1-148
HTEOV90	1336	870532	AC011953	7705	1-126
HTEOV90	1336	870532	AC027300	7706	1-158
HTEOV90	1336	870532	AC022231	7707	1-151
HTEOV90	1336	870532	AC023242	7708	1-86
HTEOV90	1336	870532	AC048342	7709	1-130
HTEOV90	1336	870532	AL121656	7710	1-2346

					2487-3703 3832-4167
HTEOV90	1336	870532	AC048342	7711	1-118
HTEOW39	1338	870566	AL356464	7712	1-142 570-728 1523-1638 1741-1926
HTEOW39	1338	870566	AL356797	7713	1-142 570-728 1523-1638 1741-1926
HTEOW39	1338	870566	Z98304	7714	1-142 570-728 1523-1638 1742-1926
HTEOW39	1338	870566	AL356464	7715	1-538
HTEOW39	1338	870566	AL356464	7716	1-437
HTEOW39	1338	870566	AL356797	7717	1-136
HTEOW39	1338	870566	AL356797	7718	1-437
HTEOW39	1338	870566	Z98304	7719	1-538
HTEOW39	1338	870566	Z98304	7720	1-437
HTEPA08	1340	958391	AL133480	7721	1-918 1739-2284 2588-2821
HTEPA08	1340	958391	AC021645	7722	1-918 1739-2284 2588-2821
HTEPA08	1340	958391	AL133480	7723	1-640
HTEPA08	1340	958391	AL133480	7724	1-331
HTEPA08	1340	958391	AC021645	7725	1-331
HTEPA08	1340	958391	AC021645	7726	1-640
HTEPC76	1344	767824	AC008403	7727	1-270 797-964 1044-1123 1229-1342 1467-1845 2640-2987 3113-4431 4439-4555 5060-5233 5373-5488 6011-6410 6946-7068 7284-7513 8720-8791 8874-9044 9864-10381

					10706-10846 12118-12821 12983-13117 13377-14044 14066-15218 16961-17324
HTEPC76	1344	767824	AC008403	7728	1-1468
HTEPC76	1344	767824	AC008403	7729	1-583
HTEPJ79	1352	774212	AC073569	7730	1-370
HTEPJ79	1352	774212	AC073595	7731	1-371
HTEPJ79	1352	774212	AC007949	7732	1-371
HTEPM33	1354	870561	AL132776	7733	1-42 1020-1195 2173-2338 6839-7029 11880-12103
HTEPM33	1354	870561	AL132776	7734	1-173
HTEPM33	1354	870561	AL132776	7735	1-791
HTEPM52	1355	806471	AC022744	7736	1-600
HTEPM52	1355	806471	AC009588	7737	1-600
HTEPM52	1355	806471	AC022744	7738	1-197
HTEPM52	1355	806471	AC009588	7739	1-86 404-641 1062-1413 1506-1869 2725-3045 3625-4106
HTEPP29	1358	917207	AC064831	7740	1-467
HTEPP29	1358	917207	AC023103	7741	1-470
HTEPP29	1358	917207	AC036199	7742	1-470
HTEPT25	1363	870509	AC074256	7743	1-408
HTEPZ10	1368	963433	AC011028	7744	1-543
HTEQB03	1370	922941	AC023331	7745	1-393
HTEQB03	1370	922941	AL358236	7746	1-391
HTEQB03	1370	922941	AL359374	7747	1-391
HTEQB03	1370	922941	AL358236	7748	1-220
HTEQB03	1370	922941	AC023331	7749	1-292
HTEQB03	1370	922941	AL359374	7750	1-116 130-210
HTEQB03	1370	922941	AL359374	7751	1-290
HTEQD40	1371	915198	AL121906	7752	1-158 414-924 975-1601
HTEQD40	1371	915198	AL121906	7753	1-776 856-949 1390-1468 1591-2048

					2412-2463 2503-2918 3174-3270
HTEQD40	1371	915198	AL121906	7754	1-411
HTEQD69	1372	918579	AL157399	7755	1-712
HTEQD69	1372	918579	AC018476	7756	1-712
HTEQD69	1372	918579	AC007949	7757	1-711
HTEQD69	1372	918579	AC018476	7758	1-922 1159-1246 1288-1481 1547-1649 1673-1758 2026-2482 2668-3297
HTEQD69	1372	918579	AC018476	7759	1-145 541-677 1557-1852
HTEQD69	1372	918579	AC007949	7760	1-145 541-677 1555-1850
HTEQD69	1372	918579	AC007949	7761	1-314
HTEQJ42	1377	806495	AC007405	7762	1-510
HTEQO81	1378	806504	AC010766	7763	1-198 316-378 3441-3601
HTEQO81	1378	806504	AL163636	7764	1-198 316-378 3442-3602
HTEQO81	1378	806504	AL163195	7765	1-198 316-378 3442-3602
HTEQO81	1378	806504	AC010766	7766	1-301
HTEQO81	1378	806504	AC010766	7767	1-591
HTEQO81	1378	806504	AL163636	7768	1-591
HTEQO81	1378	806504	AL163636	7769	1-177
HTEQO81	1378	806504	AL163195	7770	1-293
HTEQO81	1378	806504	AL163195	7771	1-591
HTEQR94	1382	966486	AC010980	7772	1-1047
HTEQT63	1383	924799	AC026410	7773	1-1820
HTLAB44	1385	530579	AC006549	7774	1-530
HTLAB44	1385	530579	AC000097	7775	1-530
HTLAB44	1385	530579	AC006547	7776	1-530
HTLAB44	1385	530579	AC006549	7777	1-42 147-212 380-436 699-747 821-1197



HTLAB44	1385	530579	AC006549	7778	1-311
HTLAB44	1385	530579	AC000097	7779	1-42 147-212 380-436 699-747 821-1197
HTLAB44	1385	530579	AC000097	7780	1-311
HTLAB44	1385	530579	AC006547	7781	1-42 147-212 380-436 699-747 821-1197
HTLAB44	1385	530579	AC006547	7782	1-314
HTLAB73	1386	575019	AC000078	7783	1-341 2484-3046 3397-3489 4877-5165 5231-5303 5477-5578 6429-7030 7187-7509 7842-8148
HTLAB73	1386	575019	AC000078	7784	1-507
HTLAC81	1387	679414	AC019258	7785	1-200
HTLAC81	1387	679414	AP002807	7786	1-204
HTLAC81	1387	679414	AC034259	7787	1-204
HTLAD21	1389	761758	AC024029	7788	1-37 1140-1255 2004-2115 2586-2801 3347-3460 4242-4320 4959-5284
HTLAD21	1389	761758	AC019121	7789	1-37 1140-1249 2584-2799 3342-3460 4243-4321 4956-5281
HTLAD21	1389	761758	AC019121	7790	1-336
HTLAD21	1389	761758	AC024029	7791	1-336
HTLAV67	1392	530742	AC005258	7792	1-326
HTLAV67	1392	530742	AC005258	7793	1-278
HTLAV67	1392	530742	AC005258	7794	1-89
HTLBE55	1394	967408	AC010325	7795	1-78 167-227 346-440

HTLBF14	1396	971661	AC018638	7796	1-252 3348-3556 3720-3822 3877-4004 4927-5181 5226-5736
HTLBF14	1396	971661	AC018638	7797	1-130
HTLBG83	1397	527942	AP002840	7798	1-102 1010-1888 2064-2785
HTLBG83	1397	527942	AC016056	7799	1-290
HTLBG83	1397	527942	AC009466	7800	1-94 1419-1520 2428-3306 3482-4203
HTLBG83	1397	527942	AP000880	7801	1-94 1419-1520 2428-3306 3482-4203
HTLBG83	1397	527942	AC009466	7802	1-998
HTLBG83	1397	527942	AP002840	7803	1-368
HTLBG83	1397	527942	AP000880	7804	1-368
HTLBG83	1397	527942	AC009466	7805	1-368
HTLBG83	1397	527942	AP000880	7806	1-996
HTLCA95	1398	911655	AC012616	7807	1-1151
HTLCA95	1398	911655	AC012616	7808	1-284
HTLCX76	1400	767667	AC011736	7809	1-97 612-718 913-1065 5655-5767 6173-6351 6803-6954 9565-9706 13178-13360 13963-14058 17351-17653 19337-19476 22288-22405 22711-22769 24564-24601 25844-25947 26983-27370 28050-28233 29000-29163
HTLCX76	1400	767667	AC027618	7810	1-97 612-718 913-1065

					5657-5768 6174-6352 6807-6958 9568-9709 13178-13216
HTLCX76	1400	767667	AC027618	7811	1-89
HTLCX76	1400	767667	AC011736	7812	1-152
HTLCX76	1400	767667	AC027618	7813	1-40 3350-3648 7546-7581
HTLCY27	1401	682208	AC021663	7814	1-1164
HTLCZ48	1403	572959	AC015497	7815	1-402
HTLCZ48	1403	572959	AL353695	7816	1-405
HTLCZ48	1403	572959	AC015497	7817	1-140
HTLCZ48	1403	572959	AL353695	7818	1-140
HTLCZ96	1404	815897	AL118498	7819	1-160 1685-1871 2742-2910 5414-5599 6883-6914 8226-8271 9277-9733 11311-11543
HTLDE64	1407	908613	AC005087	7820	1-207 524-773 945-1056 3251-3659
HTLDE64	1407	908613	AC005087	7821	1-232
HTLDE64	1407	908613	AC005087	7822	1-232
HTLDO94	1413	915223	AC053520	7823	1-163 1175-1361 1623-1701 1971-2071 2785-3328
HTLDO94	1413	915223	AC053520	7824	1-187
HTLDO94	1413	915223	AC053520	7825	1-219 490-1016 2053-2295
HTLDQ25	1415	870057	AL355315	7826	1-1401
HTLDQ25	1415	870057	AL359388	7827	1-1401
HTLDQ25	1415	870057	AL355315	7828	1-636
HTLDQ25	1415	870057	AL355315	7829	1-112 128-185
HTLDQ25	1415	870057	AL359388	7830	1-112 128-185
HTLDQ25	1415	870057	AL359388	7831	1-636
HTLDS55	1416	891322	AC020663	7832	1-64

					584-868 2241-2367 2459-2539 4278-4416 4580-4698 4790-4886 8560-8662 9190-9487 10204-10263 10348-10678
HTLDS55	1416	891322	AC020663	7833	1-309
HTLDS55	1416	891322	AC020663	7834	1-304 849-1240 2947-3164
HTLDV31	1420	867748	AC022505	7835	1-547
HTLDZ14	1423	573401	AL133318	7836	1-403
HTLDZ14	1423	573401	AL133318	7837	1-353
HTLDZ14	1423	573401	AL133318	7838	1-381
HTLEB14	1424	573464	AL353647	7839	1-1046 1485-1639
HTLEB14	1424	573464	AL138784	7840	1-1046 1485-1639
HTLEB14	1424	573464	AC022786	7841	1-1046 1485-1639
HTLEB14	1424	573464	AL353647	7842	1-116
HTLEB14	1424	573464	AL138784	7843	1-116
HTLED72	1425	906989	AC011442	7844	1-281
HTLEG65	1427	870154	AC026083	7845	1-1655
HTLEG91	1428	870257	AL031406	7846	1-114
HTLEG91	1428	870257	Z94160	7847	1-114
HTLEG91	1428	870257	AL031406	7848	1-945
HTLEG91	1428	870257	Z94160	7849	1-945
HTLEI47	1430	573460	AC025959	7850	1-307 650-751 1100-1209
HTLEI47	1430	573460	AC009451	7851	1-307 650-751 1100-1209
HTLEI47	1430	573460	AC025963	7852	1-307 650-751 1100-1209
HTLEL01	1434	917022	AC024631	7853	1-496 699-1081 1222-1331 1385-1614 1658-1771 1784-2779

					3025-3737
HTLEL01	1434	917022	AC053481	7854	1-84 142-371 415-528 541-1535 1780-2492 3204-3300 3678-5015
HTLEL01	1434	917022	AC027821	7855	1-50 213-300 859-1126 1195-1903 2104-2487 2628-2737 2791-3020 3064-3182 3190-4185 4433-5145 5857-5953 6331-7971 7973-8232 8452-8515
HTLEL01	1434	917022	AC036181	7856	1-84 141-370 414-532 540-1535 1776-2488 3200-3296 3674-5593 5809-6696
HTLEL01	1434	917022	AC036181	7857	1-524 687-774 1333-1600 1669-2377 2578-2962 3103-3212 3266-3495 3539-3657 3665-4659 4905-5617 6332-6428 6806-8442 8444-8703 8918-9805
HTLEL01	1434	917022	AC023133	7858	1-524 688-775 1333-1600

					1669-2321 2574-2957 3098-3207 3261-3490 3534-3652 3660-4655 4896-5608 6320-6416 6792-8432 8434-8693 8908-9796
HTLEL01	1434	917022	AC067923	7859	1-104 267-354 913-1180 1249-1956 2157-2540 2681-2790 2844-3073 3117-3235 3243-4238 4484-5196 5908-6004 6382-8301 8517-9404
HTLEL01	1434	917022	AC015818	7860	1-940
HTLEL01	1434	917022	AC003976	7861	1-524 688-775 1334-1601 1670-2378 2579-2962 3103-3212 3266-3495 3539-3657 3665-4659 4905-5617 6332-6428 6806-8442 8444-8703 8918-9804
HTLEL01	1434	917022	AC021317	7862	1-529
HTLEL01	1434	917022	AC036181	7863	1-358
HTLEL01	1434	917022	AC053481	7864	1-297
HTLEL01	1434	917022	AC036181	7865	1-371
HTLEL01	1434	917022	AC036181	7866	1-371
HTLEL01	1434	917022	AC023133	7867	1-243
HTLEL01	1434	917022	AC036181	7868	1-243
HTLEL01	1434	917022	AC023133	7869	1-371

HTLEL01	1434	917022	AC067923	7870	1-371
HTLEL01	1434	917022	AC015818	7871	1-527
HTLEL01	1434	917022	AC015818	7872	1-554 559-639
HTLEL01	1434	917022	AC003976	7873	1-371
HTLEL01	1434	917022	AC003976	7874	1-243
HTLEL01	1434	917022	AC021317	7875	1-1419 1443-1741 1748-2500
HTLEL01	1434	917022	AC021317	7876	1-103
HTLEL07	1436	953712	AC015936	7877	1-85 1216-1369 1748-1880 2593-3004 3388-3920 4277-5617
HTLEL07	1436	953712	AC015936	7878	1-1765 2427-2527 3995-4672 4991-5033 5608-5837 6046-6184 6451-6567 7324-7820 8101-8200 8402-8463 9279-9875
HTLEL31	1437	669950	AF053356	7879	1-71 234-304 320-826 878-1099 1233-1683 2077-3297
HTLEL31	1437	669950	AF053356	7880	1-434
HTLEL31	1437	669950	AF053356	7881	1-152
HTLEQ07	1441	953706	AC009485	7882	1-159 352-455 634-742 1105-1433
HTLEQ07	1441	953706	AC009485	7883	1-550
HTLES54	1443	574884	AC007732	7884	1-694
HTLES54	1443	574884	AC007732	7885	1-102
HTLES54	1443	574884	AC007732	7886	1-1969
HTLET56	1444	911654	AL356984	7887	1-1371
HTLET78	1445	836820	AC048358	7888	1-64 135-253 439-619

					880-1007 1334-1548 1691-2473
HTLET78	1445	836820	AC027307	7889	1-64 135-253 439-619 880-1007 1335-1549 1692-2474
HTLET78	1445	836820	AC027307	7890	1-80
HTLET93	1446	573454	AC021744	7891	1-105
HTLEV33	1447	527956	AC024257	7892	1-1156
HTLEV33	1447	527956	AC024257	7893	1-496
HTLEV33	1447	527956	AC024257	7894	1-529
HTLEW12	1449	870255	AC069004	7895	1-1937
HTLEW12	1449	870255	AC069004	7896	1-744
HTLEW21	1450	573458	AC008392	7897	1-80 1758-1900 3780-4202 4434-4597 4677-4747
HTLEW21	1450	573458	AC027218	7898	1-80 1754-1896 3776-4198 4430-4593 4673-4743
HTLEW21	1450	573458	AC027218	7899	1-872
HTLEW21	1450	573458	AC008392	7900	1-872
HTLEY11	1451	967309	AC036174	7901	1-88 1369-1453 2944-3069 3655-4026
HTLEZ14	1453	791662	AC006549	7902	1-530
HTLEZ14	1453	791662	AC000097	7903	1-530
HTLEZ14	1453	791662	AC006547	7904	1-530
HTLEZ14	1453	791662	AC006549	7905	1-42 147-212 380-436 699-747 821-1197
HTLEZ14	1453	791662	AC006549	7906	1-311
HTLEZ14	1453	791662	AC000097	7907	1-42 147-212 380-436 699-747 821-1197
HTLEZ14	1453	791662	AC000097	7908	1-311



HTLEZ14	1453	791662	AC006547	7909	1-42 147-212 380-436 699-747 821-1197
HTLEZ14	1453	791662	AC006547	7910	1-314
HTLEZ15	1454	934288	AC021163	7911	1-212 773-858 1055-1178
HTLEZ15	1454	934288	AC011495	7912	1-210 774-859 1056-1155
HTLEZ15	1454	934288	AC021163	7913	1-150
HTLEZ15	1454	934288	AC021163	7914	1-334
HTLEZ15	1454	934288	AC011495	7915	1-150
HTLEZ15	1454	934288	AC011495	7916	1-325
HTLFC20	1457	917128	AL354944	7917	1-116 1049-1279 1947-2369 2924-3064 3498-9096 10048-10150 10917-11052 11221-11920 12125-12310 12501-12633 12868-13122 13980-14176 16118-16486 16537-17101 17616-18267 18312-19168 20650-20901 21433-21866 23387-23568 23660-23748
HTLFC20	1457	917128	AL354944	7918	1-259
HTLFC20	1457	917128	AL354944	7919	1-101
HTLGD25	1465	870136	AC025865	7920	1-1491
HTLGD25	1465	870136	AC019225	7921	1-1491
HTLGD25	1465	870136	AL160006	7922	1-1491
HTLGD25	1465	870136	AC019225	7923	1-480
HTLGD25	1465	870136	AC025865	7924	1-481
HTLGD25	1465	870136	AL160006	7925	1-481
HTLGD69	1466	835493	AC013713	7926	1-1128
HTLGD69	1466	835493	AL157875	7927	1-1128
HTLGD69	1466	835493	AC013713	7928	1-362

					5379-5440
HTLGD69	1466	835493	AC013713	7929	1-493
HTLGD69	1466	835493	AL157875	7930	1-362 5379-5440
HTLGM07	1470	952254	AC003688	7931	1-81 236-691 773-1054 1662-1893 2248-2282 3053-3219 3774-4061 4238-4344 4469-4939 5460-5564 5664-6980
HTLGM07	1470	952254	AC003688	7932	1-85 509-995 1324-1425 1574-1640
HTLGM07	1470	952254	AC003688	7933	1-265
HTLHE72	1475	963471	AL353608	7934	1-510
HTLHE72	1475	963471	AL353608	7935	1-628
HTLHE72	1475	963471	AL353608	7936	1-907
HTLHL82	1476	958334	AL162377	7937	1-246 3348-4249
HTLHO94	1477	968685	AC006445	7938	1-1321
HTLHP80	1480	870156	AL132868	7939	1-784
HTLHP80	1480	870156	AL132868	7940	1-135
HTLIK11	1489	966043	AC008649	7941	1-504 1236-1319 2515-2917 4549-4998 5053-5186 5694-5778 6477-6722 9052-9536 9591-9714 9993-10115
HTLIK11	1489	966043	AC008649	7942	1-370 376-776
HTLIP19	1490	958351	AC018595	7943	1-147 393-578 1688-1771 4090-4246 4573-4704 5143-5249 6244-6312

					6446-6554 6763-6903
HTLIP19	1490	958351	AC018595	7944	1-140
HTLIY52	1495	942161	AC011448	7945	1-194 424-1198 1938-2018 3137-3317 5423-5732 5894-6019 6299-6608 7425-7771 8216-8713 9697-9815 9872-9959 10811-11127 11264-11754 11867-12454 12539-13980 14020-14373 14522-15107 15641-15786 18585-22176 22246-22801 24994-25641 26099-26401 28795-29074 29176-29432 29653-29854 31298-31468 31507-32203 32864-33359 34805-34936 35464-35750 35878-36319 36610-37065 37680-38123 38902-39124 42685-42993 43593-43745 47682-47911 48694-49237 49352-49706 52310-52618 53725-54348 54650-55016 56425-56525 56655-57164

					58248-59197 59662-60112 60732-61475 62024-62173 69325-69730
HTLIY52	1495	942161	AC011448	7946	1-544
HTLIY52	1495	942161	AC011448	7947	1-293
HTLJA24	1497	934279	AC006237	7948	1-77 1994-2263 3098-3450 3551-4203
HTLJA24	1497	934279	AC006237	7949	1-1048 1633-2065 2080-2333 2374-2524 4212-4459 5299-5463 7313-7346
HTLJA24	1497	934279	AC006237	7950	1-101
HTLJC71	1498	922923	AC009516	7951	1-2009
HTLJC71	1498	922923	AC007957	7952	1-1747
HTLJC71	1498	922923	AC018751	7953	1-2009
HTLJC71	1498	922923	AC023490	7954	1-2009
HTLJC71	1498	922923	AC009516	7955	1-375
HTLJC71	1498	922923	AC009516	7956	1-494
HTLJC71	1498	922923	AC007957	7957	1-205
HTLJC71	1498	922923	AC018751	7958	1-494
HTLJC71	1498	922923	AC023490	7959	1-375
HTLJC71	1498	922923	AC018751	7960	1-375
HTLJJ75	1501	924755	AL354888	7961	1-1283
HTLJJ75	1501	924755	AL033527	7962	1-448 451-1733
HTLJJ75	1501	924755	AL354888	7963	1-699
HTLJJ75	1501	924755	AL033527	7964	1-696
HTLJL23	1502	922994	AL031587	7965	1-151 441-552 1214-1667 1820-2290 2375-2664 4552-5062 5224-5492 6136-6319 6684-7594 7786-8096 8297-8930 8932-10855
HTLJL23	1502	922994	AL031587	7966	1-135

					2617-2705 3232-3371 5671-5793
HTTAD55	1503	835652	AC021558	7967	1-260
HTTAD55	1503	835652	AC021558	7968	1-599
HTTAE49	1504	723331	AC023266	7969	1-491
HTTAE49	1504	723331	AC023266	7970	1-276
HTTAE49	1504	723331	AC023266	7971	1-1777
HTTAJ35	1506	707750	AC022650	7972	1-77 3371-4503
HTTAJ35	1506	707750	AC022650	7973	1-273
HTTAJ50	1507	509657	AC022148	7974	1-287
HTTAJ50	1507	509657	AC022148	7975	1-392
HTTAN57	1508	509453	AC010299	7976	1-304
HTTAS96	1509	961057	AC074073	7977	1-254
HTTAS96	1509	961057	AC022621	7978	1-320
HTTAS96	1509	961057	AC022621	7979	1-272
HTTAS96	1509	961057	AC022621	7980	1-195
HTTAU82	1510	797726	AC009618	7981	1-342
HTTAU82	1510	797726	AL390022	7982	1-510
HTTAU82	1510	797726	AC006517	7983	1-191 443-741 2568-2781 3248-3544 3716-3884
HTTAU82	1510	797726	AL137226	7984	1-342
HTTAU82	1510	797726	AL139165	7985	1-342
HTTAU82	1510	797726	AC006927	7986	1-191 443-741 2568-2778 3317-3427 3717-3885
HTTAU82	1510	797726	AC009618	7987	1-731
HTTAU82	1510	797726	AL390022	7988	1-728
HTTAU82	1510	797726	AC006517	7989	1-115
HTTAU82	1510	797726	AL390022	7990	1-383
HTTAU82	1510	797726	AC006517	7991	1-76 848-890 1618-2210
HTTAU82	1510	797726	AL137226	7992	1-731
HTTAU82	1510	797726	AL139165	7993	1-731
HTTAU82	1510	797726	AC006927	7994	1-89
HTTAU82	1510	797726	AC006927	7995	1-76 848-890 1618-2210
HTTBH34	1512	530565	AC008883	7996	1-1480

					1521-2216
HTTBH34	1512	530565	AC008401	7997	1-103 795-938 1928-3094
HTTBH34	1512	530565	AC008905	7998	1-527 1329-1594 2331-2573 2841-2943 3635-3778 4769-6401 6442-7129
HTTBH34	1512	530565	AC008865	7999	1-76 1854-2048 4402-4492 5258-5784 6586-6851 7588-7830 8098-8200 8892-9035 10026-11658 11699-12384
HTTBH34	1512	530565	AC008883	8000	1-144
HTTBH34	1512	530565	AC008401	8001	1-244
HTTBH41	1513	530562	AL133215	8002	1-747 955-1885 2072-2316 2864-3486 4259-4395 4625-4789 5237-6834
HTTBH41	1513	530562	AL133215	8003	1-458
HTTBH41	1513	530562	AL133215	8004	1-187 316-492 663-724 870-1310 2217-2658 2795-3946 3989-5369 5762-6797 6802-6998
HTTBH54	1514	530563	AC013443	8005	1-305
HTTBJ94	1515	530564	AC012306	8006	1-371 2517-2948 3269-3389 4036-4139 4655-4747 6026-6302

					6920-7056 7205-7304 8993-12574
HTTBN67	1516	578085	AF235102	8007	1-227
HTTBN67	1516	578085	AF235102	8008	1-117 290-371 1962-2328
HTTCA15	1517	869705	AC005833	8009	1-412
HTTCA15	1517	869705	AC005833	8010	1-559
HTTCD71	1519	530393	AL049844	8011	1-74 381-637 1227-1614 1677-3333 4088-4213 4220-4876 5053-5406 5474-5917 6045-6442
HTTCD71	1519	530393	AL049844	8012	1-263
HTTCD71	1519	530393	AL049844	8013	1-885
HTTCL35	1520	529672	AC024375	8014	1-253 1273-1795
HTTCL35	1520	529672	AC024375	8015	1-418
HTTDF50	1522	526385	AC022335	8016	1-1306
HTTDF50	1522	526385	AC022335	8017	1-156
HTTDI21	1525	869686	AC074236	8018	1-485
HTTDI21	1525	869686	AC009269	8019	1-192 206-468 1229-1713 2228-2407 2998-3211 3314-3817 4343-4938 5571-5768
HTTDI21	1525	869686	AC009269	8020	1-104
HTTDI21	1525	869686	AC009269	8021	1-559
HTTDL45	1528	523452	AC007390	8022	1-75 417-583 1679-1765 2788-3466 4413-4490 4941-5105 5400-5517 6071-6185 8399-8718 9893-10500
HTTDL45	1528	523452	AC007390	8023	1-803

HTTDL45	1528	523452	AC007390	8024	1-186 901-2187 2559-2605 2853-4188 4215-6320 6739-7105 7892-8398 8852-9356 9561-10277 10360-10560 12504-12595 13356-13552 13845-13905 15014-15064 15377-15953 16401-16466 16831-17031 17378-18339 18502-18552 19127-19426 19501-19804 20934-21502 21567-21695 21900-21988 22836-23379 23660-23743 23890-24076 24682-24916 26831-27787 28708-30551 32927-33109
HTTDL89	1529	959837	AC004803	8025	1-376
HTTDL89	1529	959837	AC004765	8026	1-376 471-1538 2707-3361
HTTDL89	1529	959837	AC004803	8027	1-1068
HTTDL89	1529	959837	AC004803	8028	1-2019 3153-3257 3637-3880 4449-4655 4695-4983 5401-6067 7497-7573 8470-8588 8874-9327 9904-10065 11619-11681



					12466-12581 12911-13213 14830-14911 16048-17861 17889-18018 18305-18362 18566-18740 19076-19167
HTTDL89	1529	959837	AC004765	8029	1-264
HTTDN85	1531	783444	AC078852	8030	1-442
HTTDN85	1531	783444	AC022763	8031	1-443
HTTDN85	1531	783444	AC078852	8032	1-538
HTTDN85	1531	783444	AC022763	8033	1-538
HTTDR91	1534	790336	AC005740	8034	1-176 1646-1818 4524-4697 5747-5899 8660-9945 10558-10883 11064-11295 11314-11646 14324-14496 15739-15886 16611-16794 18676-21241 22938-23085 23224-24224 24447-24843 25199-25490 25515-27062
HTTDR91	1534	790336	AC005740	8035	1-540
HTTDR91	1534	790336	AC005740	8036	1-398
HTTDR92	1535	573666	AC023098	8037	1-368
HTTDR92	1535	573666	AC003046	8038	1-368
HTTDR92	1535	573666	AC023098	8039	1-368
HTTDR92	1535	573666	AC023098	8040	1-62 1717-2020 2315-2432 3271-3381 4686-4832
HTTDR92	1535	573666	AC003046	8041	1-62 1728-2020 2315-2432 3271-3381 4686-4832
HTTDR92	1535	573666	AC003046	8042	1-368
HTTDS02	1536	920589	AL139100	8043	1-309

					2987-3113 4207-4877 5573-5677 5684-5845 9382-9495 11034-11269 14694-14786 16010-16116 16799-17013 17078-17196 18023-18134 19046-19565 20157-20645
HTTDS02	1536	920589	AL139100	8044	1-121
HTTDX84	1537	921100	AC016912	8045	1-137 839-1199 4679-4860
HTTDX84	1537	921100	AC018682	8046	1-137 840-1200 4680-4861
HTTDZ91	1539	523206	AL137229	8047	1-145 572-661 4888-5112 6942-7339 7820-7914 8041-8423 8957-9106 11434-11806 11986-12491 13542-13680 14277-16062
HTTDZ91	1539	523206	AL137229	8048	1-1790
HTTEH58	1541	747943	AC068781	8049	1-387
HTTEH58	1541	747943	AC068365	8050	1-387
HTTEH58	1541	747943	AC073466	8051	1-387
HTTEH58	1541	747943	AC068365	8052	1-813
HTTEH58	1541	747943	AC073466	8053	1-813
HTTEH58	1541	747943	AC068781	8054	1-813
HTTEL50	1542	745985	AL359551	8055	1-443
HTTEL50	1542	745985	AL360010	8056	1-227 3577-4019 4331-4797
HTTEL50	1542	745985	AL360010	8057	1-556
HTTEV62	1544	573614	AC018706	8058	1-120 327-596
HTTEY64	1545	974107	AL121759	8059	1-457
HTTEY64	1545	974107	AL121759	8060	1-182

					1815-1886
HTTEY64	1545	974107	AL121759	8061	1-413
HTTEY67	1546	917903	AC012467	8062	1-174
					339-486
					2042-2214
					3686-3797
					4399-4507
					4767-4939
					5440-5530
					5625-5731
					6070-6204
					7501-7716
					7788-7943
					8041-8340
					9024-9118
					9626-9767
					10655-10995
					11935-12314
					12866-13125
					13129-15725
					15843-17466
					17604-18286
					18317-18594
					18649-19313
					20121-20283
					20736-23161
					23235-23790
					23989-24537
					25167-25310
					26353-26806
					26813-26872
					27021-27163
					29155-29282
					30027-30154
					32358-32499
					35505-35567
HTTEY67	1546	917903	AC012467	8063	1-150
					3016-3145
					3424-3525
					4978-5073
					5533-5878
					6004-6106
					6241-7612
					7874-8710
HTTEY67	1546	917903	AC012467	8064	1-427
HTTEZ34	1547	771602	AL356116	8065	1-508
HTTEZ34	1547	771602	AC017067	8066	1-244

					4587-5158 5672-6138
HTTEZ34	1547	771602	AL356116	8067	1-467
HTTFA16	1548	870198	AC067749	8068	1-81 610-1275 1444-1660 1750-2267 2590-3070 3195-3769 3824-4507 4543-4871 4996-6355 6426-6973 6998-7524
HTTFA16	1548	870198	AC067749	8069	1-360
HTTFB60	1549	869666	AC023818	8070	1-2041 2271-2442 2475-6107
HTTFB60	1549	869666	AC023818	8071	1-353
HTTFB60	1549	869666	AC023818	8072	1-120
HTTFG35	1550	778426	AC019205	8073	1-231 428-607
HTTFG35	1550	778426	AL133336	8074	1-231 428-607
HTTFG35	1550	778426	AC068247	8075	1-231 428-607
HTTFG35	1550	778426	AC019205	8076	1-974
HTTFG35	1550	778426	AL133336	8077	1-974
HTTFG35	1550	778426	AC068247	8078	1-974
HTTFG83	1551	974284	AL137128	8079	1-693
HTTFG83	1551	974284	AL137128	8080	1-413
HTTFL89	1554	974346	AC005551	8081	1-436
HTTFL89	1554	974346	AC005551	8082	1-135 1535-1715 2043-2114 5528-6140
HTTFM17	1555	750942	AC009994	8083	1-422 658-1260 2947-3758
HTTFM17	1555	750942	AC009994	8084	1-155
HTTFS59	1557	825922	AP001332	8085	1-1736 1937-2284 2596-2760 3034-3162 4857-4934 5196-5338 6131-6244

					6276-6756 7170-7308 7537-7569 7659-7709
HTTFS59	1557	825922	AC013606	8086	1-1738 1938-2285 2478-2580 2594-2758 3036-3160
HTTFS59	1557	825922	AC015685	8087	1-1737
HTTFS59	1557	825922	AC013606	8088	1-489
HTTFS59	1557	825922	AC015685	8089	1-487
HTTFT08	1558	934460	AC013726	8090	1-43 317-418 1097-2127 2193-2346 2456-2503 2713-3159 3231-6093
HTTFT08	1558	934460	AC013726	8091	1-536
HTTFV93	1559	925544	AL139410	8092	1-1222 1338-1532
HTTFV93	1559	925544	AL353760	8093	1-1222 1338-1532
HTTFW03	1560	923105	AC006566	8094	1-472
HTTFX21	1561	924775	AC026210	8095	1-1869
HTTFX21	1561	924775	AC026210	8096	1-150
HTTFZ70	1562	974066	AL355594	8097	1-115 207-368 516-876 1441-1565 2014-2187 2404-2951 3705-5973 6008-8387
HTTFZ70	1562	974066	AL033383	8098	1-1004 2982-3105 3372-3514 4034-4609 5643-5817 9019-9176 10736-10817 12053-12475 13292-13391 14259-14546 15423-15497 16340-16660

					17244-17630 17683-17864 17981-18128 18264-18585 18678-18767 20206-20356 20955-21122 22834-23358 23679-23944 24217-24406 24565-24684 25085-25439 26585-26758 26975-27139 28275-30550 30582-33232 36611-37091 37344-38113 46301-46465 55718-55969 66431-66687
HTTFZ70	1562	974066	AL138831	8099	1-1004 2982-3105 3372-3514 4034-4609 5643-5817 9019-9176 10736-10817 12053-12475 13292-13391 14259-14546 15423-15497 16340-16660 17244-17630 17683-17864 17981-18128 18264-18585 18678-18767 20206-20356 20955-21122 22836-23360 23681-23946 24219-24408 24567-24686 24778-24939 25087-25441 26585-26758

					26975-27139 28275-30550 30582-33232 36611-37091 37344-38113 46301-46465 55718-55969 66431-66687
HTTFZ70	1562	974066	AL033383	8100	1-375
HTTFZ70	1562	974066	AL355594	8101	1-266 539-728
HTTFZ70	1562	974066	AL033383	8102	1-205
HTTFZ70	1562	974066	AL138831	8103	1-375
HTTFZ70	1562	974066	AL138831	8104	1-205
HTTHU43	1564	953479	AC008393	8105	1-1033
HTTHU43	1564	953479	AC010285	8106	1-1031
HTTHU43	1564	953479	AC010313	8107	1-1032
HTTHU43	1564	953479	AC010313	8108	1-217 1839-2045 2948-3521 3767-4083 5131-6402 6992-7292 8101-8167
HTTHU43	1564	953479	AC008393	8109	1-401
HTTHU43	1564	953479	AC010285	8110	1-401
HTTIG04	1565	926752	AC012609	8111	1-458
HTTIG04	1565	926752	AC026406	8112	1-458
HTTIG04	1565	926752	AC012609	8113	1-661
HTTIG04	1565	926752	AC026406	8114	1-661
HTTIH23	1566	869636	AC040970	8115	1-1041 1186-1881 2845-2973
HTTIH23	1566	869636	AC011676	8116	1-1041 1185-1880 2844-2972 5523-5631 6840-7111 7196-7890 8274-9038 9916-10234
HTTIH23	1566	869636	AC040970	8117	1-740
HTTIH23	1566	869636	AC011676	8118	1-400
HTTIH80	1567	869635	AC006443	8119	1-385
HTTIH80	1567	869635	AC006443	8120	1-201
HTTIN23	1569	869634	AC002549	8121	1-566
HTTIU05	1570	931015	AC008663	8122	1-461

					3399-3527 4652-5129 5447-6031 6123-6401 6651-7418 8095-9142
HTTIU05	1570	931015	AC010339	8123	1-76 1203-1680 1998-2582 2674-2952 3202-3969 4646-5693
HTTIU05	1570	931015	AC022259	8124	1-585
HTTIU05	1570	931015	AC008663	8125	1-101
HTTIU05	1570	931015	AC008663	8126	1-130
HTTIU05	1570	931015	AC010339	8127	1-130
HTTIU05	1570	931015	AC022259	8128	1-478
HTTIU05	1570	931015	AC022259	8129	1-280
HTTIW81	1571	922817	AL357149	8130	1-433
HTTIW81	1571	922817	AL357149	8131	1-399
HTTIZ05	1572	930994	AC012246	8132	1-443
HTTIZ05	1572	930994	AC012246	8133	1-646
HTTJA11	1573	839725	AC068403	8134	1-440
HTTJA11	1573	839725	AC067775	8135	1-440
HTTJA11	1573	839725	AC068403	8136	1-288
HTTJA11	1573	839725	AC067775	8137	1-288
HTTJA47	1574	869618	AP002091	8138	1-276 3023-3207
HTTJA47	1574	869618	AP002091	8139	1-149
HTTJA47	1574	869618	AP002091	8140	1-179
HTTJH13	1575	869615	AC013436	8141	1-324
HTTJH13	1575	869615	AC004859	8142	1-324
HTTJH13	1575	869615	AC013436	8143	1-209
HTTJH13	1575	869615	AC013436	8144	1-65 191-304 339-660 712-888
HTTJH13	1575	869615	AC004859	8145	1-209
HTTJH13	1575	869615	AC004859	8146	1-65 191-304 339-660 712-888
HTTJM01	1576	913799	AC009469	8147	1-310 383-487
HTTJQ06	1577	934130	AC022202	8148	1-1086
HTTJQ06	1577	934130	AL136969	8149	1-308 973-1308



					4938-4961 8196-8326 11508-12593 13039-13501 15003-15234 17040-17530 20304-20729 25068-25578 25828-26705 26728-26816 26831-27320 28927-29311 29405-29614 30437-31474
HTTJQ06	1577	934130	AC022202	8150	1-461
HTTJQ06	1577	934130	AL136969	8151	1-98
HTTJQ06	1577	934130	AL136969	8152	1-377
HTTJX68	1578	974063	AC026318	8153	1-312 987-1439 3651-3801
HTTJX68	1578	974063	AC023910	8154	1-453
HTTJX68	1578	974063	AC026318	8155	1-241
HTTJX68	1578	974063	AC026318	8156	1-128
HTTJY08	1579	958170	AL355586	8157	1-453
HTTJY08	1579	958170	AL355307	8158	1-453
HTTJY08	1579	958170	AL023584	8159	1-453
HTTJY08	1579	958170	AL355586	8160	1-349
HTTJY08	1579	958170	AL355307	8161	1-349
HTTJY08	1579	958170	AL023584	8162	1-349
HTTKF89	1581	960928	AL035425	8163	1-524
HTTKF89	1581	960928	AL035425	8164	1-133
HTTKF89	1581	960928	AL035425	8165	1-418
HTTKK06	1583	974311	AC046137	8166	1-1282 1645-2164 3070-3680 3888-3943 3999-4329 5064-5333 6343-6658 6733-6987 7096-7247 7432-7831 8006-8123 8293-8756 9804-9858
HTTKK06	1583	974311	AL138965	8167	1-1284 1646-2165

					3071-3681 3889-3944 4000-4499 5065-5333 6343-6662 6733-6987 7096-7247 7432-7831 8006-8123 8293-8756 9803-9857
HTTKL80	1584	974316	AC027572	8168	1-495
HTTKN21	1585	974310	AC024563	8169	1-495
HTTKN21	1585	974310	AC010318	8170	1-495
HTTKN21	1585	974310	AC008626	8171	1-495
HTTKN21	1585	974310	AC024563	8172	1-276
HTTKN21	1585	974310	AC010318	8173	1-276
HTTKN21	1585	974310	AC008626	8174	1-276
HTTKS13	1588	926795	AC023593	8175	1-494
HTTKS13	1588	926795	AC012406	8176	1-195 510-647 1298-1791 2210-2419 2689-2911 3871-4132 4236-4418 5740-5922 9461-9715 10556-10634
HTTKS13	1588	926795	AC023593	8177	1-207 480-702 1662-1923
HTTKS13	1588	926795	AC012406	8178	1-87
HTTKV17	1589	830008	AC005027	8179	1-993 2319-3110 3184-3327 3609-3791 4475-4927 8332-9120 9164-9583 10780-11193 12543-14416
HTTKV17	1589	830008	AC005027	8180	1-2780
HUDAM29	1590	529157	AL161451	8181	1-354
HUDAM29	1590	529157	AL161451	8182	1-238
HUDBZ78	1591	739638	AC018638	8183	1-123 666-828

					4839-5113 6402-6995 7727-7910 9744-9996 10630-10732 14112-14236 17737-17771 19858-20081 20801-20915 21556-21640 22127-22645
HUDBZ78	1591	739638	AC018638	8184	1-368
HUDBZ78	1591	739638	AC018638	8185	1-374
HUKAA62	1592	503626	AC009789	8186	1-298
HUKAA62	1592	503626	AC009789	8187	1-166
HUKAC72	1594	966804	AC040933	8188	1-747 1785-1982 2445-2506 3235-3323 3868-4360 7129-7364 8883-9903
HUKAC72	1594	966804	AC040933	8189	1-431
HUKAM82	1595	954420	AL096865	8190	1-323
HUKAX07	1596	954359	AL355773	8191	1-294
HUKCC86	1597	529727	AL359388	8192	1-226
HUKCC86	1597	529727	AL359388	8193	1-168
HUKDH28	1598	531165	AC006055	8194	1-975 1001-1658 3268-3377 5231-5317 5881-6170 6180-6546 6750-10147 10463-11127
HUKDH28	1598	531165	AC006055	8195	1-344
HUKDH50	1599	531163	AL157414	8196	1-356
HUKEH36	1600	531110	AC009753	8197	1-279 1685-1909 3546-3709 5906-6035 6290-6604 6687-6845 9440-9473 16009-16296 20083-20229 20650-20784

					22152-22256 27158-27662 27907-28244 28359-28661 30187-30275 31177-31379 31668-32105 33142-33243 38066-38199 40117-40592 45086-45120
HUKEH36	1600	531110	AC009851	8198	1-201 752-1089 1204-1522 3032-3120 4022-4224 4513-4950 5988-6089 10911-11044 12962-13437 17931-17965
HUKEH36	1600	531110	AC009753	8199	1-101
HUKEH36	1600	531110	AC009753	8200	1-944
HUKEH36	1600	531110	AC009851	8201	1-944
HUKEH50	1601	531108	AC018782	8202	1-52 517-603 785-1153
HUKEH50	1601	531108	AC024575	8203	1-52 518-604 785-1153
HUKEH50	1601	531108	AC008481	8204	1-52 517-603 784-1152
HUKEH50	1601	531108	AC024575	8205	1-115 1178-1315 1730-1957 2076-2562 2638-2854
HUKEH50	1601	531108	AC008481	8206	1-40 503-612 1674-1811 2224-2446 2570-3053 3134-3271
HUKEK55	1602	522213	AL136295	8207	1-329 621-1000 1739-2035

					2395-3026
					3192-5637
					5774-6952
					7033-7120
					7249-7328
					7415-7456
					7876-8005
					8093-8272
					8521-8588
					8691-8796
					8883-8960
					9217-9387
					9492-9542
					9701-9811
					10103-10210
					10357-10490
					10690-10805
					10909-11022
					11253-11376
					11565-11674
					11773-11883
					11999-12082
					12157-12216
					12317-12421
					12502-12696
					12828-12881
					12913-13134
					13225-13394
					13509-13717
					13829-13964
					14050-14163
					14402-14637
					14749-15004
					15091-16277
					16464-17066
					17139-18207
					18288-18319
					18465-18527
					18767-18851
					18893-19292
					19548-20127
					22009-22378
					22471-22544
					22627-24028
HUKEK55	1602	522213	AL136295	8208	1-290
HUKEK55	1602	522213	AL136295	8209	1-102
HUKES11	1604	967604	AL358433	8210	1-339

HUKES11	1604	967604	AL358433	8211	1-2038
HUKES11	1604	967604	AL358433	8212	1-368
HUKFL69	1605	526819	AL365510	8213	1-392
HUKFL69	1605	526819	AC009564	8214	1-392
HUNAD94	1608	575299	AC024403	8215	1-115
HUNAD94	1608	575299	AL133238	8216	1-353
HUVBB90	1609	503042	AC020611	8217	1-340
HUVBB90	1609	503042	AC020611	8218	1-313 880-916
HUVBB93	1610	502903	AL121603	8219	1-279
HUVCS14	1614	914768	AC011448	8220	1-194 424-1198 1938-2018 3137-3317 5423-5732 5894-6019 6299-6608 7425-7771 8216-8713 9697-9815 9872-9959 10811-11127 11264-11754 11867-12454 12539-13980 14020-14373 14522-15107 15641-15786 18585-22176 22246-22801 24994-25641 26099-26401 28795-29074 29176-29432 29653-29854 31298-31468 31507-32203 32864-33359 34805-34936 35464-35750 35878-36319 36610-37065 37680-38123 38902-39124 42685-42993 43593-43745 47682-47911

					48694-49237 49352-49706 52310-52618 53725-54348 54650-55016 56425-56525 56655-57164 58248-59197 59662-60112 60732-61475 62024-62173 69325-69730
HUVCS14	1614	914768	AC011448	8221	1-544
HUVCS14	1614	914768	AC011448	8222	1-293
HUVCU71	1615	968663	AC005410	8223	1-26 2590-2889 3602-3771 4339-5017 6295-6485 6909-6998 7521-8143 8433-8529 9637-9899 10563-10925 11304-11768 12104-12617 13487-13648 13989-14159 15246-15413 15996-16140 16890-17029 18712-20020
HUVCU71	1615	968663	AC005410	8224	1-1213 1372-2983 3192-3439 4265-5250
HUVCW62	1616	535361	AL139384	8225	1-399
HUVCW62	1616	535361	AL139384	8226	1-245
HUVCW62	1616	535361	AL139384	8227	1-115
HUVDB28	1617	535006	AL078634	8228	1-139 234-735 1948-2046 6359-6449 8088-8267 11305-11788 11843-11990 12405-12744

HUVDB28	1617	535006	AL078634	8229	1-312
HUVDB53	1618	509119	AC012265	8230	1-340
HUVDD09	1620	707061	AC020661	8231	1-143 2042-2218 2970-3063 3209-3270 3343-5080 6183-6473 6577-8040
HUVDD09	1620	707061	AC022835	8232	1-191
HUVDD09	1620	707061	AC025166	8233	1-1464
HUVDD09	1620	707061	AC022835	8234	1-310
HUVDD09	1620	707061	AC025166	8235	1-291
HUVDD09	1620	707061	AC020661	8236	1-270
HUVDD09	1620	707061	AC025166	8237	1-270
HUVDF84	1622	526248	AC005319	8238	1-500
HUVDF84	1622	526248	AC005319	8239	1-195
HUVDI28	1624	530558	AC019221	8240	1-1047 1216-1744 1897-2018 2020-2411 3079-3142 4571-5609 5750-5845 7019-7362 9012-9414 10076-10170 12381-12686 13742-15856
HUVDI28	1624	530558	AC019072	8241	1-1043
HUVDI28	1624	530558	AC019221	8242	1-309
HUVDI28	1624	530558	AC019072	8243	1-526 681-801
HUVDL30	1626	530387	AC012307	8244	1-412 472-1744
HUVDL30	1626	530387	AC012307	8245	1-735
HUVDO25	1627	679477	AC023247	8246	1-639 1201-1344
HUVDO25	1627	679477	AC004134	8247	1-639 1201-1344
HUVDO25	1627	679477	AC023247	8248	1-443
HUVDO25	1627	679477	AC004134	8249	1-443
HUVDP95	1628	530386	AC016901	8250	1-102 525-581 2057-2142 4836-4922 7896-8518



					8902-9266 9524-9956 10085-10276 10366-10523 11312-11968
HUVDP95	1628	530386	AC020566	8251	1-622 1005-1369 1627-2060 2189-2377 2470-2626 3415-4071
HUVDP95	1628	530386	AC016594	8252	1-102 525-581 2057-2142 4836-4922 7897-8519 8903-9267 9525-9957 10086-10277 10367-10524 11313-11969 12174-12740 13281-14490 15022-15220 17186-17508 17563-17615 17759-18259 18289-20530
HUVDP95	1628	530386	AC016901	8253	1-561
HUVDP95	1628	530386	AC020566	8254	1-671
HUVDP95	1628	530386	AC016901	8255	1-204
HUVDP95	1628	530386	AC020566	8256	1-183
HUVDP95	1628	530386	AC016594	8257	1-204
HUVDP95	1628	530386	AC016594	8258	1-1093 1494-2538
HUVDS26	1629	958027	AC004111	8259	1-575
HUVDS26	1629	958027	AC004111	8260	1-327
HUVDS26	1629	958027	AC004111	8261	1-814
HUVDU51	1630	868660	AC025220	8262	1-289
HUVDU51	1630	868660	AC025225	8263	1-289
HUVDU51	1630	868660	AL009183	8264	1-638 1698-1986 2294-2509 2514-2585 3279-3605 4335-5324 5604-5876

HUVDU51	1630	868660	AC025225	8265	1-216 221-292
HUVDU51	1630	868660	AC025220	8266	1-638
HUVDU51	1630	868660	AC025225	8267	1-637
HUVDU51	1630	868660	AL009183	8268	1-116
HUVDU51	1630	868660	AL009183	8269	1-122
HUVED54	1632	534783	AL035405	8270	1-372
HUVED54	1632	534783	AL035405	8271	1-261
HUVED54	1632	534783	AL035405	8272	1-102
HUVED65	1633	527937	AC036127	8273	1-458
HUVED65	1633	527937	AC036127	8274	1-149
HUVED65	1633	527937	AC036127	8275	1-416
HUVFA55	1635	868779	AC007378	8276	1-529
HUVFA55	1635	868779	AC007378	8277	1-208
HUVFB48	1636	967815	AL390961	8278	1-321
HUVFB48	1636	967815	AC022245	8279	1-342
HUVFB48	1636	967815	AL390961	8280	1-142
HUVFB69	1637	868782	AC022575	8281	1-620
HUVFB69	1637	868782	AC016032	8282	1-620
HUVFB69	1637	868782	AC073344	8283	1-620
HUVFB69	1637	868782	AC016032	8284	1-346
HUVFB69	1637	868782	AC073344	8285	1-346
HUVFC07	1638	952080	AC015900	8286	1-1535
HUVFH03	1639	922064	AC069496	8287	1-397
HUVFH03	1639	922064	AC069496	8288	1-525
HUVFH32	1640	934003	AC011077	8289	1-339
HUVFH32	1640	934003	AP001016	8290	1-339
HUVFH32	1640	934003	AP002381	8291	1-339
HUVFH32	1640	934003	AP001016	8292	1-248
HUVFH32	1640	934003	AC011077	8293	1-248
HUVFH32	1640	934003	AP002381	8294	1-248
HUVFI03	1641	868776	AC024712	8295	1-171
HUVFK11	1642	965765	AC055840	8296	1-95
HUVFK11	1642	965765	AL353807	8297	1-478
HUVFK11	1642	965765	AL353807	8298	1-459
HUVFK11	1642	965765	AL353807	8299	1-740
HUVFK58	1643	868784	AC024578	8300	1-787
HUVFK58	1643	868784	AC024578	8301	1-365
HUVFK58	1643	868784	AC024578	8302	1-455
HUVFL71	1644	958059	AL354673	8303	1-529
HUVFL71	1644	958059	AC024013	8304	1-529
HUVFT28	1647	870617	AC012600	8305	1-507 2756-3737 3755-4805
HUVFT28	1647	870617	AC012515	8306	1-604 1372-2592

					2978-3484 5369-5489 5732-6714 6732-8593 9071-9596 10007-10688 11077-11936 11999-12352 12393-12826 12889-13172 14459-14905 15045-15332 15471-15604 16006-16132 16983-17141 18515-20238 20365-20760 21907-22420 22584-23772 24017-24060 24693-24857 25545-25576
HUVFT28	1647	870617	AC008116	8307	1-604 1378-2594 2980-3486 5371-5491 5735-6716 6734-8595 9073-9598 10009-10690 11079-11938 12001-12354 12395-12828 12891-13175 14461-14907 15047-15334 15473-15606 16008-16134 16985-17143 18110-20236 20363-20758 21905-22418 22582-23770 24691-24846 25543-25574
HUVFT28	1647	870617	AC012600	8308	1-1221
HUVFT28	1647	870617	AC012515	8309	1-107

HUVFT28	1647	870617	AC012515	8310	1-163
HUVFT28	1647	870617	AC008116	8311	1-163
HUVFT28	1647	870617	AC008116	8312	1-104
HUVGZ77	1650	909169	AC040977	8313	1-32 411-784 1015-1238
HUVGZ77	1650	909169	AC015918	8314	1-32 411-784 1015-1238 1331-1701 2014-2138
HUVHB35	1651	868751	AC005683	8315	1-196 302-372 839-1057 1691-1918 2676-2791 3763-4031 5738-6460 7068-7266 8789-9240 10436-10852 13855-14025 17307-17855 18105-18217 22503-23073 23416-24726 25238-25727 27347-27779 34463-34627 34784-36975
HUVHB35	1651	868751	AF172277	8316	1-196 302-372 896-1074 1699-1926 2684-2799 3774-4042 5750-6472 7044-7312 8835-9286 10482-10898 13901-14071 17353-17901 18151-18263 22833-23407 23750-25060 25572-26061 27681-28113

					34798-34962 35119-37310
HUVHB35	1651	868751	AC005683	8317	1-427
HUVHB35	1651	868751	AF172277	8318	1-427
HUVHB59	1652	963129	AC011448	8319	1-406 7558-7707 8256-8999 9619-10069 10534-11483 12567-13076 13206-13306 14715-15081 15383-16006 17113-17421 20025-20379 20494-21037 21820-22049 25986-26138 26738-27046 30607-30829 31608-32051 32666-33121 33412-33853 33981-34267 34795-34926 36372-36867 37528-38224 38263-38433 39877-40078 40299-40555 40657-40936 43330-43632 44090-44737 46930-47485 47555-51146 53945-54090 54624-55209 55358-55711 55751-57192 57277-57864 57977-58467 58604-58920 59772-59859 59916-60034 61018-61515 61960-62306 63123-63432

					63712-63837 63999-64308 66414-66594 67713-67793 68533-69307 69537-69730
HUVHB59	1652	963129	AC011448	8320	1-544
HUVHB59	1652	963129	AC011448	8321	1-293
HUVHG80	1655	968507	AC002076	8322	1-415
HUVHG80	1655	968507	AC002076	8323	1-1551
HUVHG80	1655	968507	AC002076	8324	1-118
HUVHI07	1656	952090	AC073334	8325	1-1383
HUVHI07	1656	952090	AC073334	8326	1-192
HUVHU74	1658	868649	AL355855	8327	1-478
HUVHU74	1658	868649	AC025405	8328	1-478
HUVHU74	1658	868649	AL355855	8329	1-1183
HUVHU74	1658	868649	AC025405	8330	1-1182
HUVHU74	1658	868649	AL355855	8331	1-443
HUVHU74	1658	868649	AC025405	8332	1-442
HVCBV04	1660	925844	AL358172	8333	1-717
HVCBV04	1660	925844	AL136370	8334	1-717
HVCBV04	1660	925844	AL358172	8335	1-356
HVCBV04	1660	925844	AL358172	8336	1-647
HVCBV04	1660	925844	AL136370	8337	1-356
HVCBV04	1660	925844	AL136370	8338	1-647
HVCKK04	1662	925796	AC009861	8339	1-1379
HVCKK04	1662	925796	AC016949	8340	1-1381
HVCKK04	1662	925796	AC009861	8341	1-743
HVCKK04	1662	925796	AC009861	8342	1-855
HVCKK04	1662	925796	AC016949	8343	1-855
HVCKK04	1662	925796	AC016949	8344	1-86 589-770 1468-2212 2994-5375 5393-7226 7602-9856 10092-10593 11034-11679 13908-14759
HVVBK45	1667	964102	AL162853	8345	1-3940
HVVBK45	1667	964102	AC068175	8346	1-1900
HVVBK45	1667	964102	Z98172	8347	1-100 3320-6223 6258-7123
HVVBK45	1667	964102	AL162853	8348	1-476
HVVBK45	1667	964102	AL162853	8349	1-1290

					1418-2787
HVVBK45	1667	964102	AC068175	8350	1-865
HVVBK72	1668	933167	AC008947	8351	1-125 1365-2751
HVVBK72	1668	933167	AC016612	8352	1-633 3297-3421 4587-5973
HVVBK72	1668	933167	AC008860	8353	1-633 3297-3421 4588-5974
HVVBK72	1668	933167	AC008947	8354	1-489
HVVBK72	1668	933167	AC016612	8355	1-408
HVVBK72	1668	933167	AC016612	8356	1-500
HVVBK72	1668	933167	AC008860	8357	1-408
HVVBK72	1668	933167	AC008860	8358	1-500
HVVBV44	1669	917559	AC008719	8359	1-242
HVVCO01	1670	913996	AC053484	8360	1-889
HVVCO01	1670	913996	AC023961	8361	1-889
HVVBM06	1674	933528	AF188031	8362	1-186 744-865 3969-4014 4551-4771 5464-5965
HVVBM06	1674	933528	AF188031	8363	1-481
HVVBM06	1674	933528	AF188031	8364	1-292
HUVHL82	1675	912011	AC004596	8365	1-70 786-966 1113-1199 1510-1580 1841-1904 2162-2231 2325-2486 2586-6603 6650-8125 8240-8441 8573-10040
HUVHL82	1675	912011	AC004596	8366	1-386
HUVHL82	1675	912011	AC004596	8367	1-519 1032-1253 3288-3977 4296-5037 5065-6012 6068-6617 7947-8275 8567-10680
HUVHI06	1676	952479	AP000876	8368	1-1990 2006-5890

HUVHI06	1676	952479	AC006238	8369	1-2271 2287-6172 7457-7798 8669-9191 9453-9805
HUVHI06	1676	952479	AC006238	8370	1-439
HUVGP05	1677	930892	AC009871	8371	1-448
HUVGP05	1677	930892	AC009812	8372	1-555
HUVGP05	1677	930892	AC009871	8373	1-1510
HUVGP05	1677	930892	AC009812	8374	1-1510
HUVFE03	1680	922889	AL357621	8375	1-226 244-695
HUVFE03	1680	922889	AL357621	8376	1-250
HUVDH61	1685	526590	AC006129	8377	1-438
HUVCU26	1686	974232	AC005342	8378	1-695
HUVCU26	1686	974232	AC005342	8379	1-416
HUVCU26	1686	974232	AC005342	8380	1-275
HUVBC21	1688	671479	AL136170	8381	1-2421 2585-3666 3742-3807 3903-4614 4708-4785
HUVBC21	1688	671479	AL136170	8382	1-77 1950-2416 2558-2959 3957-4319
HUVAA46	1689	667943	AL035400	8383	1-602 1503-1697 3827-4399 4614-5805
HUNAK12	1690	839574	AC027778	8384	1-454
HUNAK12	1690	839574	AC006327	8385	1-454
HUNAK12	1690	839574	AC027778	8386	1-173
HUNAK12	1690	839574	AC006327	8387	1-285
HUNAG41	1691	711543	AC015480	8388	1-564
HUNAG41	1691	711543	AC023138	8389	1-564
HUNAF22	1692	800452	AC006222	8390	1-442
HUNAD10	1697	968590	AC073349	8391	1-1351
HUNAD10	1697	968590	AC073349	8392	1-147
HUNAD10	1697	968590	AC073349	8393	1-746
HUNAC68	1698	753817	AL353727	8394	1-580 4850-5325 5800-6282 6475-6544 6648-6977 8563-11289 12142-12783



					12858-13147 13154-13434 13613-13740 15488-15743 15955-15992 16231-16359 16374-16745 16974-17032 17437-17545 17841-17880 18596-18751 19250-19371
HUNAC68	1698	753817	AL358790	8395	1-36 118-200 268-2563
HUNAC68	1698	753817	AC009144	8396	1-380 1161-1306 2510-3089 7359-7834 8309-8791 8984-9053 9157-9486 11072-13798 14651-15292 15367-15656 15663-15943 16122-16249 17998-18253 18465-18502 18741-18869 18884-19255 19484-19542 20242-20390 21106-21261 21755-21893 23252-23319 25611-25701 26408-26563 26828-27037 27045-27154
HUNAC68	1698	753817	AL358790	8397	1-376
HUNAC68	1698	753817	AL358790	8398	1-103
HUNAB76	1699	968754	AC019250	8399	1-726
HUNAB76	1699	968754	AC024119	8400	1-726
HUNAB76	1699	968754	AL049715	8401	1-299
HUNAB76	1699	968754	AC019250	8402	1-129
HUNAB76	1699	968754	AC019250	8403	1-453

HUNAB76	1699	968754	AC024119	8404	1-469
HUNAB76	1699	968754	AC024119	8405	1-582
HUNAB76	1699	968754	AL049715	8406	1-469
HUNAB76	1699	968754	AL049715	8407	1-539
HUNAB42	1700	714264	AL121585	8408	1-775
HUNAB42	1700	714264	AL121585	8409	1-79 1720-2905
HUKFS69	1701	754186	AL356852	8410	1-592
HUKFS69	1701	754186	AC068046	8411	1-766 860-1860 1960-2625
HUKFS69	1701	754186	AL021068	8412	1-766 860-1860 1960-2625
HUKFS69	1701	754186	AC068046	8413	1-467
HUKFS69	1701	754186	AL356852	8414	1-602
HUKFS69	1701	754186	AC068046	8415	1-602
HUKFS69	1701	754186	AL021068	8416	1-467
HUKFL89	1702	574525	AC053531	8417	1-643
HUKFL89	1702	574525	AC025788	8418	1-643
HUKFL89	1702	574525	AC026250	8419	1-516
HUKFL89	1702	574525	AC026250	8420	1-388
HUKFL71	1703	760581	AC073057	8421	1-241
HUKFL71	1703	760581	AC073057	8422	1-105
HUKFL52	1704	574523	AC002302	8423	1-851
HUKFE56	1706	574381	AC067901	8424	1-570
HUKFE56	1706	574381	AP002822	8425	1-576
HUKFE56	1706	574381	AC067901	8426	1-3799
HUKFE56	1706	574381	AP002822	8427	1-3799
HUKFD95	1707	796014	AC044881	8428	1-610 661-1115
HUKFD95	1707	796014	AC026292	8429	1-454
HUKFD95	1707	796014	AC026291	8430	1-610 661-1114
HUKFD95	1707	796014	AC044881	8431	1-389
HUKFD95	1707	796014	AC026291	8432	1-389
HUKFD95	1707	796014	AC026291	8433	1-249
HUKEY01	1708	921504	AC023479	8434	1-878
HUKEY01	1708	921504	AL353151	8435	1-1947
HUKEY01	1708	921504	AC011871	8436	1-464
HUKEY01	1708	921504	AL136231	8437	1-1947 4426-5048 6590-6760 7264-7384 7980-8163
HUKEY01	1708	921504	AC023479	8438	1-297

HUKEY01	1708	921504	AL353151	8439	1-966
HUKEY01	1708	921504	AC011871	8440	1-508
HUKEY01	1708	921504	AL136231	8441	1-304
HUKER62	1709	772501	AC069076	8442	1-116 486-680 1904-2035 2615-2745 2944-3073 3778-4744 5131-5234 5328-6647
HUKER62	1709	772501	AC004754	8443	1-108 415-503 559-667 1308-1458 2640-2791 2981-3442 3936-4211 4832-5135 7065-7155 7723-7848 8596-9232 9936-10061 10421-10615 11839-11970 12549-12679 12878-13007 13714-14680 15067-15170 15264-16579
HUKER62	1709	772501	AC069076	8444	1-637
HUKER62	1709	772501	AC004754	8445	1-357
HUKDY02	1711	920815	AC069195	8446	1-488
HUKDY02	1711	920815	AC012306	8447	1-1805
HUKDY02	1711	920815	AC012306	8448	1-490
HUKCP30	1714	690933	AC011477	8449	1-580
HUKCP30	1714	690933	AC011477	8450	1-584
HUKCO11	1715	967742	AC022972	8451	1-96 511-867 3365-3592 5373-5521 6677-6961 7423-7816 7924-8345
HUKCO11	1715	967742	AC022972	8452	1-736
HUKCC25	1717	529723	AC007378	8453	1-259
HUKAT59	1719	628540	AL365274	8454	1-1254

HUKAM19	1722	672076	AC022022	8455	1-318
HUKAM19	1722	672076	AC022022	8456	1-297
HUKAL44	1724	716927	AC073462	8457	1-46 2717-4929 4991-5459 5581-5827 6813-7648 8152-8598 8796-9240 10094-10567 10604-11064 11694-11815 12072-12344 12700-12807
HUKAL44	1724	716927	AC073462	8458	1-152
HUKAJ91	1725	790487	AC024670	8459	1-1661
HUKAJ91	1725	790487	AC020746	8460	1-1661
HUKAJ91	1725	790487	AC024670	8461	1-1032
HUKAJ91	1725	790487	AC020746	8462	1-1032
HUKAB63	1728	625273	AC068451	8463	1-800 870-1610
HUKAB63	1728	625273	AC068451	8464	1-133
HUKAB25	1729	677470	AC025802	8465	1-531
HUKAB25	1729	677470	AC025624	8466	1-531
HUKAB25	1729	677470	AC025802	8467	1-2446
HUKAB25	1729	677470	AC025624	8468	1-125
HUKAB25	1729	677470	AC025802	8469	1-120
HUKAB25	1729	677470	AC025624	8470	1-2446
HUKAA54	1730	503630	AL022325	8471	1-154 1810-1865 1947-2233 2391-2757 2828-4196 4215-4421 4990-5074 5133-5294 5676-6489 6529-7035
HUKAA54	1730	503630	AL031588	8472	1-154 1810-1865 1947-2233 2391-2757 2828-4196 4215-4421 4990-5074 5133-5294 5676-6489

					6529-7035
HUKAA54	1730	503630	AL022325	8473	1-875
HUKAA54	1730	503630	AL031588	8474	1-875
HUDBE95	1734	795796	AC019073	8475	1-780 5430-5615 7641-7685 10826-10887 11255-11332 12359-12669 13590-13776 16097-16197 16225-16569 17409-17588 17614-18145 18212-18277 20025-20135 21203-21289 21668-21798 22067-22836 22902-23233 23289-24983
HUDBE95	1734	795796	AC009079	8476	1-780 1966-2659 5432-5617 7643-7687 10830-10891 11259-11336 12363-12673 13594-13780 16101-16201 16229-16573 17510-17593 17618-18149 18216-18281 20020-20130 21198-21284 21663-21793 22060-22829 22895-23226 23282-24977
HUDBE95	1734	795796	AC019073	8477	1-464
HUDBE95	1734	795796	AC009079	8478	1-454
HUDAK19	1740	671974	AC024249	8479	1-882 1119-1964
HTTKC85	1742	956206	AC007246	8480	1-445
HTTKC85	1742	956206	AC007246	8481	1-653
HTTKC85	1742	956206	AC007246	8482	1-766

HTTJN26	1744	869612	AC010761	8483	1-545 730-2324 2733-2817 2910-2993 3334-3705 4186-4362
HTTJN26	1744	869612	AC010761	8484	1-158
HTTJN26	1744	869612	AC010761	8485	1-244
HTTIX05	1746	931024	AL138955	8486	1-492 646-1277 1480-2938
HTTIX05	1746	931024	AL136104	8487	1-493 647-1278 1481-2939
HTTIX05	1746	931024	AL136104	8488	1-124
HTTIN11	1749	965920	AC073580	8489	1-815
HTTIN11	1749	965920	AL109916	8490	1-815
HTTIN11	1749	965920	AC073580	8491	1-436
HTTIN11	1749	965920	AC073580	8492	1-228
HTTIN11	1749	965920	AL109916	8493	1-436
HTTIN11	1749	965920	AL109916	8494	1-228
HTTIE08	1750	958169	AC026405	8495	1-4307
HTTIE08	1750	958169	AC020566	8496	1-575
HTTIE08	1750	958169	AC016901	8497	1-6684
HTTIE08	1750	958169	AC020566	8498	1-34 1050-1364
HTTIE08	1750	958169	AC016901	8499	1-131 1868-2214 2273-2385 3084-3172
HTTIB12	1751	969568	AC026576	8500	1-715
HTTHJ56	1752	944914	AC013715	8501	1-241 407-704 1629-1750 3363-3439 6942-7140 7436-7629 11318-11960
HTTFG12	1753	751809	AC068289	8502	1-1168
HTTFG12	1753	751809	AC068289	8503	1-104
HTTEQ59	1755	739445	AC018654	8504	1-113 608-2226 2955-3217 3366-4135 4148-4842
HTTEQ59	1755	739445	AC022073	8505	1-113 608-2226

					2955-3217 3366-4135 4148-4842
HTTEQ01	1756	917156	Z83845	8506	1-684
HTTEQ01	1756	917156	Z83845	8507	1-504 658-707 1786-3045 3351-4099
HTTEO59	1757	900662	AC046168	8508	1-2879
HTTEO53	1758	728344	AC074116	8509	1-280 905-4002
HTTEO53	1758	728344	AL162722	8510	1-280 905-3688
HTTEO53	1758	728344	AC074116	8511	1-99
HTTEO53	1758	728344	AL162722	8512	1-99
HTTEJ56	1759	573669	AC068707	8513	1-134 1054-1276 1688-1740 2572-2856 2936-3012 3748-3941 4846-4969 5395-5467 5675-6158
HTTEJ56	1759	573669	AC068707	8514	1-1098
HTTEB05	1760	932294	AL031672	8515	1-1512
HTTEB05	1760	932294	AL031672	8516	1-489
HTTEB05	1760	932294	AL031672	8517	1-692 4641-5166 6143-6251 8784-8849 11398-11796 11851-12038 13499-13858 14606-14716 17177-17863 19079-19195 19315-19699 20154-20572 22216-22455 22597-23544
HTTDO59	1761	744438	AL160282	8518	1-671 781-2678 2858-2994 3178-3347 3426-3693
HTTDM42	1762	460948	AC073619	8519	1-421

					704-793 1909-2043
HTTDM42	1762	460948	AL354745	8520	1-421 704-793 1910-2044 2204-2966 3204-4359
HTTDM42	1762	460948	AL354745	8521	1-904
HTTDM42	1762	460948	AL354745	8522	1-233
HTTDL81	1763	694222	AL022328	8523	1-481 729-828 1094-1193 1289-1396 1553-1617 1798-1929 2089-2152 2247-4100 4146-4381 4518-4577 4865-4961 5157-5580 5725-6072
HTTDL81	1763	694222	AL022328	8524	1-723
HTTDL81	1763	694222	AL022328	8525	1-81 162-241 315-880 1024-1324 1365-1937 2215-2794
HTTDL75	1764	766551	AC068013	8526	1-384
HTTDL75	1764	766551	AC068471	8527	1-697
HTTDL75	1764	766551	AC074378	8528	1-697
HTTDL75	1764	766551	AC074378	8529	1-495
HTTCQ95	1766	796674	AC026065	8530	1-100 772-894 1216-1581 1841-2015 2108-2519 3025-3350 3659-4132 6075-6743
HTTBR42	1770	714220	AL157409	8531	1-570 4245-4986
HTTBR42	1770	714220	AL157409	8532	1-312
HTTBO82	1772	780164	AC044902	8533	1-436 477-893
HTTBO82	1772	780164	AC009595	8534	1-436



					477-893
HTTBO82	1772	780164	AC044902	8535	1-256
HTTBM03	1773	925409	AC031984	8536	1-766 2180-2586 3286-3634 3651-3858 3895-4311
HTTBM03	1773	925409	AL050318	8537	1-766 2178-2584 3284-3632 3649-3856 3893-4309 4861-5005 7178-7361 11400-11880 12124-12392 13017-13267 15332-15583 15793-16031 16947-17288 18668-18837 19381-19764 21255-21574 22689-22887 23670-23952 27931-28039 28646-28948 29548-29705 30258-32335
HTTBM03	1773	925409	AL390374	8538	1-766 2178-2584 3284-3632 3649-3856 3893-4309 4861-5005 7178-7362 11063-11173 11400-11880 12124-12392 13017-13268 15332-15583 15795-16033 16952-17289 18674-18843 19387-19770 21261-21580 22695-22893

					23676-23958 27937-28045 28652-28954 29556-29713 30266-32343
HTTBM03	1773	925409	AC031984	8539	1-145
HTTBM03	1773	925409	AL050318	8540	1-151
HTTBM03	1773	925409	AL050318	8541	1-195
HTTBM03	1773	925409	AL390374	8542	1-195
HTTBI80	1774	781590	AC008628	8543	1-162 1001-1703
HTTBI80	1774	781590	AC010226	8544	1-162 1001-1703
HTTBH95	1775	530559	AL121759	8545	1-182 1815-1886
HTTBH95	1775	530559	AL121759	8546	1-457
HTTAQ60	1778	742377	AC055720	8547	1-643 842-1218
HTTAQ60	1778	742377	AC024145	8548	1-643 842-1223
HTTAQ60	1778	742377	AC055720	8549	1-679
HTTAQ60	1778	742377	AC024145	8550	1-679
HTTAQ60	1778	742377	AC024145	8551	1-135
HTTAP21	1780	671488	AL023803	8552	1-198 4122-4247 8722-8781 12640-12742 15684-15778 17532-17609 17745-18841 19072-19205 20937-21397 21427-21993 22264-22342 24544-24618 28047-28160 30396-30560 32340-33565
HTTAP21	1780	671488	AL023803	8553	1-293
HTTAP21	1780	671488	AL023803	8554	1-414
HTTAP09	1781	826343	AC023593	8555	1-437
HTTAP09	1781	826343	AC012406	8556	1-437
HTTAP09	1781	826343	AC012406	8557	1-786 1865-1938
HTTAP09	1781	826343	AC023593	8558	1-787 1865-1938
HTTAC77	1785	772735	AC021291	8559	1-779

HTTAA94	1786	793001	AL031255	8560	1-908
HTTAA94	1786	793001	AL031255	8561	1-480
HTTAA39	1787	710355	AC016691	8562	1-526 564-1577
HTTAA39	1787	710355	AC015719	8563	1-1149
HTTAA39	1787	710355	AC016691	8564	1-496
HTTAA39	1787	710355	AC016691	8565	1-106
HTTAA39	1787	710355	AC015719	8566	1-840
HTLIP06	1788	934207	AL162586	8567	1-2160 2297-2470
HTLIP06	1788	934207	AL162426	8568	1-2160 2297-2472 3211-3477 3629-4087
HTLIP06	1788	934207	AC007430	8569	1-2160 2297-2472 3211-3477 3629-4087
HTLIP06	1788	934207	AL162586	8570	1-136 294-491 2350-2692 3660-3898
HTLIP06	1788	934207	AL162426	8571	1-136 294-491 2351-2693 3661-3899
HTLIP06	1788	934207	AC007430	8572	1-136 294-491 2351-2693 3661-3899
HTLIP06	1788	934207	AL162426	8573	1-118
HTLIP06	1788	934207	AC007430	8574	1-118
HTLHS69	1793	870152	AC009095	8575	1-220 227-466 573-1448
HTLHS05	1794	933720	AL121753	8576	1-77 91-640 2531-2639 3380-3625 3692-4433 4677-4862 5043-5355 5532-5893 6299-10579 12966-13230 14676-15242 15749-15996

					16066-16393 16675-17238 17381-17885 18029-18260 19347-19477 20064-20199 20849-21010
HTLHS05	1794	933720	AL356652	8577	1-77 91-640 2531-2639 3380-3625 3692-4433 4677-4862 5043-5355 5532-5893 6299-10590 12979-13243 14689-15255 15762-16052 16079-16406 16688-17251 17394-17898 18042-18273 19363-19509 20088-20188 20863-21024
HTLHS05	1794	933720	AL121753	8578	1-437
HTLHS05	1794	933720	AL121753	8579	1-638 793-854
HTLHS05	1794	933720	AL356652	8580	1-437
HTLHS05	1794	933720	AL356652	8581	1-638 793-854
HTLHJ51	1796	865399	AC027421	8582	1-146 1403-3399
HTLHJ51	1796	865399	AC025860	8583	1-146 1402-3398
HTLHJ51	1796	865399	AL353622	8584	1-146 1402-3398
HTLHB93	1797	945862	AL161656	8585	1-585
HTLHB93	1797	945862	AL035460	8586	1-585
HTLHB93	1797	945862	AL161656	8587	1-29 92-459 544-844
HTLHB93	1797	945862	AL161656	8588	1-754
HTLHB93	1797	945862	AL035460	8589	1-29 92-459 544-844

HTLHB93	1797	945862	AL035460	8590	1-754
HTLGS10	1799	963458	AC055863	8591	1-34 227-316 895-1294 1518-1678 1917-2553
HTLGR32	1800	928245	AC013403	8592	1-1399
HTLGR32	1800	928245	AC013403	8593	1-391
HTLGR32	1800	928245	AC013403	8594	1-126
HTLGP84	1801	782194	AC020934	8595	1-58 591-853 900-1357
HTLGC43	1803	870228	AL118524	8596	1-903 936-2052
HTLGC43	1803	870228	AL118524	8597	1-497
HTLEQ92	1804	932882	AC009109	8598	1-303 1003-1241 2173-2763
HTLEQ92	1804	932882	AC010531	8599	1-303 1003-1241 2173-2763 2907-3967 4804-4849 4950-7755
HTLEQ92	1804	932882	AC009109	8600	1-722
HTLEQ92	1804	932882	AC010531	8601	1-1592
HTLEP21	1805	671151	AC016774	8602	1-138 467-569 810-930 1056-1149 1553-1686 1774-2544
HTLEP21	1805	671151	AC010789	8603	1-138 468-570 811-931 1057-1150 1554-1687 1775-2546
HTLEP21	1805	671151	AC016774	8604	1-594 1023-1155 1772-2162 2448-2739 2975-3438 3681-4096 4814-4865 5289-5389 5443-5627

					7000-7166 7396-8248 8876-9167 10516-10689 11193-11857 12200-12372 12455-12745 13874-14148 14398-14684 15738-15861 16053-16243 17510-17938 18019-18179 18259-18528 18587-18676 18960-19577 19606-20010 20036-21667 22067-26217 26261-26631 26869-27524 27631-28143 28212-28560 29119-29156 29687-30245 30256-31203 31798-33971
HTLEP21	1805	671151	AC010789	8605	1-595 1024-1156 1773-2165 2447-2738 2974-3437 3680-4095 4813-4864 5288-5388 5442-5626 6999-7165 7395-8247 8875-9166 10515-10688 11192-11856 12199-12371 12454-12755 13981-14147 14397-14683 15737-15860 16052-16242

					17509-17937 18018-18178 18258-18527 18586-18675 18959-19576 19605-20009 20035-21666 22243-26224 26240-26630 26868-27523 27630-28149 28212-28560 29119-29156 29688-30247 30269-31205 31800-33973
HTLDO01	1812	913669	AC002056	8606	1-1300
HTLDO01	1812	913669	AC000036	8607	1-1300 2362-2937
HTLDO01	1812	913669	AC002056	8608	1-375
HTLDO01	1812	913669	AC000036	8609	1-829 1755-2331 3054-3393 5260-5322
HTLDO01	1812	913669	AC000036	8610	1-375
HTLCZ79	1815	572853	AC004064	8611	1-285
HTLCZ79	1815	572853	AL161939	8612	1-285
HTLCZ79	1815	572853	AL118502	8613	1-285
HTLCZ79	1815	572853	AC004064	8614	1-97
HTLCZ79	1815	572853	AC004064	8615	1-471 571-1561
HTLCZ79	1815	572853	AL161939	8616	1-471 571-1561
HTLCZ79	1815	572853	AL118502	8617	1-471 571-1561
HTLCO02	1817	921045	AC066588	8618	1-242 2043-2258
HTLCG65	1818	413333	AC015549	8619	1-167
HTLCG65	1818	413333	AC006060	8620	1-171 3245-3475 3590-3742 4110-4269 5242-5535 6465-6516
HTLCG59	1819	530039	AC027712	8621	1-46 3805-3943 5188-5370

					6708-6843 7531-7689 8008-8127 8669-8788 9234-9406 9698-10187 10689-15514
HTLCG59	1819	530039	AL356097	8622	1-46 3805-3943 5188-5370 6709-6844 7530-7688 8007-8126 8668-8787 9234-9406 9698-10187 10693-15517
HTLCG59	1819	530039	AC027113	8623	1-46 3805-3944 5189-5371 6709-6844 7530-7688 8007-8126 8668-8787 9233-9405 9697-10186 10692-15518
HTLCG59	1819	530039	AC027712	8624	1-595
HTLCG59	1819	530039	AL356097	8625	1-595
HTLCG59	1819	530039	AC027113	8626	1-595
HTLBH67	1821	751985	AC008439	8627	1-62 293-400 452-976 1016-1058 1463-1534 1886-2026 2110-2249 2401-2463 3324-4027 4192-4288 4694-5330 5485-5650 5813-6262 6273-6401 6475-6559 6728-6847 6979-7205



					7573-7676 7730-8146 8334-8866 8885-9392
HTLBH67	1821	751985	AC008781	8628	1-85 254-371 505-731 1098-1201 1255-1671 1718-2387 2408-2915 3113-3244 3382-4278 4504-4538 4650-5645
HTLBH67	1821	751985	AC022420	8629	1-62 295-403 455-979 1019-1061 1466-1537 1890-2030 2114-2253 2405-2467 3328-4030 4195-4291 4697-5333 5488-5653 5816-6265 6276-6404 6478-6562 6731-6850 6982-7208 7575-7678 7732-8148 8195-8864 8885-9392 9590-9721 9859-10754 10980-11014 11126-12121
HTLBH67	1821	751985	AC005368	8630	1-64 294-399 451-975 1015-1057 1462-1533 1885-2025 2109-2248

					2400-2462 3323-4026 4191-4287 4693-5329 5484-5649 5812-6264 6275-6403 6477-6561 6730-6849 6981-7207 7575-7678 7732-8148 8201-8868 8887-9394 9592-9723 9861-10759 10985-11019 11131-12126
HTLBH67	1821	751985	AC008781	8631	1-292
HTLBH67	1821	751985	AC022420	8632	1-323 1372-1431 1657-1821 2377-2485 4488-4700 4954-5061 6224-6547 6819-6965 7268-7333 8088-8593 9897-10068 10109-10623 10645-10680 10812-10871 10982-11123 11345-11383 11877-12000 12310-13467
HTLBH67	1821	751985	AC022420	8633	1-292
HTLBH67	1821	751985	AC005368	8634	1-292
HTLBC07	1822	954111	AC015841	8635	1-668
HTLBC07	1822	954111	AC018617	8636	1-672
HTLBC07	1822	954111	AC004586	8637	1-672
HTLBC07	1822	954111	AC015841	8638	1-124
HTLBC07	1822	954111	AC018617	8639	1-124
HTLBC07	1822	954111	AC004586	8640	1-514 681-994 1116-1732

					1974-2431 2451-3123 3603-3698 4469-4606 5033-5496 6293-6890 6965-8015 8053-8130
HTLBC07	1822	954111	AC004586	8641	1-77 3689-3807 3960-4294 4692-4820 5674-5809 6237-6334 7138-7247 8211-8309 8720-8861 9797-10087 10098-10215 10448-11237 11311-11550 11566-11654 12306-12914 12929-13575 13587-13703 14256-14391 14535-14763 17193-17450
HTLAB29	1829	879168	AC026362	8642	1-389 508-653 1079-1226 1867-2043 2136-2239 2359-3327 3438-3958 4003-5312
HTLAB29	1829	879168	AC026362	8643	1-336
HTFBE02	1830	920507	AC022536	8644	1-31 340-421 1097-1262 2446-2621 3069-3161 3571-3791 4947-5076 5905-6987
HTFBE02	1830	920507	AC022536	8645	1-102
HTEQS95	1831	972746	AL133284	8646	1-1005

HTEQS95	1831	972746	AL133284	8647	1-258
HTEQS90	1832	973426	AP000635	8648	1-692
HTEQS90	1832	973426	AP000610	8649	1-691
HTEQS90	1832	973426	AP001547	8650	1-691
HTEQS90	1832	973426	AP000635	8651	1-543
HTEQS90	1832	973426	AP000610	8652	1-197
HTEQS90	1832	973426	AP001547	8653	1-197
HTEQS90	1832	973426	AP000610	8654	1-543
HTEQS90	1832	973426	AP001547	8655	1-543
HTEQP03	1833	870516	AC018931	8656	1-238 672-970 6605-6665
HTEQP03	1833	870516	AC018931	8657	1-323 373-560
HTEQB08	1835	958291	AL139106	8658	1-831
HTEQB08	1835	958291	AL162721	8659	1-831
HTEQB08	1835	958291	AL139106	8660	1-324
HTEQB08	1835	958291	AL162721	8661	1-261 805-1128
HTEOE28	1841	870581	AL139243	8662	1-1106
HTENY44	1842	870588	AC027544	8663	1-197 710-864 1263-1380 2382-2706 3184-3394 3970-4082
HTENY44	1842	870588	AC027544	8664	1-570
HTENY44	1842	870588	AC027544	8665	1-322
HTENV06	1843	933294	AL121753	8666	1-498
HTENV06	1843	933294	AL356652	8667	1-498
HTENV06	1843	933294	AL121753	8668	1-116
HTENV06	1843	933294	AL356652	8669	1-104
HTENL95	1848	795314	AC022930	8670	1-32 79-745 880-1680 1782-2276 2861-3730 4861-5265
HTENL95	1848	795314	AC069217	8671	1-32 79-745 880-1679
HTENL95	1848	795314	AF238376	8672	1-32 79-745 880-1680
HTENL95	1848	795314	AC022930	8673	1-150 215-626 662-1438

					2351-2999
HTENL95	1848	795314	AC022930	8674	1-297
HTENL95	1848	795314	AC069217	8675	1-297
HTENL95	1848	795314	AF238376	8676	1-297
HTENL95	1848	795314	AC069217	8677	1-495
HTENL95	1848	795314	AF238376	8678	1-495
HTENA08	1850	958380	Z97985	8679	1-460 851-1242 1372-1475 2276-2373
HTENA08	1850	958380	Z97985	8680	1-264
HTEMY05	1851	880592	AC019326	8681	1-734 1378-6434
HTEMY05	1851	880592	AF129408	8682	1-734 1378-7065
HTEMY05	1851	880592	AC019326	8683	1-579
HTEMY05	1851	880592	AF129408	8684	1-756
HTEMU66	1853	944419	AL022167	8685	1-1796
HTEMU66	1853	944419	AC018903	8686	1-631
HTEMU66	1853	944419	AC068470	8687	1-706
HTEMU66	1853	944419	AL049186	8688	1-912
HTEMU66	1853	944419	AC022305	8689	1-686
HTEMU66	1853	944419	AL049186	8690	1-87
HTEMN80	1856	775543	AP001386	8691	1-2970 3001-4307
HTEMN80	1856	775543	AP002785	8692	1-2974 3005-4311
HTEMN80	1856	775543	AP001386	8693	1-300
HTEMN80	1856	775543	AP002785	8694	1-236
HTEMI51	1858	870613	AL365214	8695	1-94 3508-4007
HTELV29	1861	806421	AC068938	8696	1-643
HTELV29	1861	806421	AC073407	8697	1-2055 3690-3915 3928-4379 4421-5222 7704-8003 11303-11530 12021-12259 12917-14410
HTELV29	1861	806421	AC073407	8698	1-350
HTELP07	1862	952274	AC041014	8699	1-118 490-918
HTELP07	1862	952274	AC041014	8700	1-332
HTELA02	1864	918699	AC021688	8701	1-687 1014-1336

HTEKI62	1866	812862	AC005848	8702	1-164 343-428 578-2903 3020-3168 4072-4415 5074-5526 5547-5780
HTEKI62	1866	812862	AC005848	8703	1-863 1241-1590 1666-2167 2328-2424 2500-2950 3000-3341 3351-3962 3976-3995 4276-5430 5485-5585 5616-5892 6622-6727 7156-8018
HTEKD77	1868	772397	AC018865	8704	1-1638
HTEJV94	1869	793039	AC058807	8705	1-946
HTEJV94	1869	793039	AC003669	8706	1-946
HTEJN12	1871	653252	AL096763	8707	1-118 1052-1310 3744-4364 4488-4515 5291-5447 6507-7124 7157-7605 7842-8575
HTEJL30	1872	696784	AC012379	8708	1-2084
HTEJL30	1872	696784	AC009697	8709	1-2084
HTEJL30	1872	696784	AC012379	8710	1-142
HTEJL30	1872	696784	AC009697	8711	1-719
HTEJL30	1872	696784	AC012379	8712	1-719
HTEJL30	1872	696784	AC009697	8713	1-142
HTEJB07	1874	953801	AC073625	8714	1-494 2402-2532
HTEJB07	1874	953801	AC007394	8715	1-430
HTEJB07	1874	953801	AC073625	8716	1-1712 1727-2677
HTEJB07	1874	953801	AC007394	8717	1-1712 1727-2677
HTEIS34	1875	887112	AC069257	8718	1-635 725-895 1011-1169

					1645-2361 2527-3215 3399-3766 3842-4045
HTEIS34	1875	887112	AC026308	8719	1-635 725-895 1011-1169 1645-2361 2527-3215 3399-3766 3842-4045
HTEIS34	1875	887112	AC069257	8720	1-165
HTEIS34	1875	887112	AC069257	8721	1-380
HTEIS34	1875	887112	AC026308	8722	1-381
HTEIS34	1875	887112	AC026308	8723	1-486
HTEIS25	1876	870660	AC053512	8724	1-252 304-440 462-606 851-994
HTEIS25	1876	870660	AL360086	8725	1-253 305-441 463-607 852-995
HTEHX57	1885	734976	AC023756	8726	1-91 1173-1400 3751-4383 4431-4890 5497-5769 5920-6396
HTEHX57	1885	734976	AP001152	8727	1-452 1059-1331 1482-1958
HTEHX57	1885	734976	AC011007	8728	1-79 3753-3901 9145-9297 9344-9538 13689-14081 14559-14683 15765-15992 17822-18243 18342-18974 19022-19481 20088-20360 20511-20987
HTEHX57	1885	734976	AC023756	8729	1-1701 1831-4730
HTEHX57	1885	734976	AP001152	8730	1-1702

					1835-4742
HTEHX57	1885	734976	AC011007	8731	1-1701
HTEHV11	1886	967439	AL021331	8732	1-569
HTEHV11	1886	967439	AL021331	8733	1-690
HTEHS17	1887	664436	AC010255	8734	1-184 308-529 2761-3109
HTEHS17	1887	664436	AC010255	8735	1-502
HTEHS17	1887	664436	AC010255	8736	1-130 310-1003 1040-1331
HTEGU55	1890	931017	Z98752	8737	1-2035
HTEGU55	1890	931017	Z98752	8738	1-465
HTEGU55	1890	931017	Z98752	8739	1-415
HTEGC30	1896	690998	AC073079	8740	1-504
HTEFO46	1899	719280	AC068790	8741	1-31 136-656
HTEFO46	1899	719280	AC024438	8742	1-31 136-942 1083-4020
HTEFO28	1900	685383	AC023123	8743	1-119 151-982 1019-1286 1442-1755 1908-2137 2256-2608 2974-3413 4977-5488 5507-8584 8676-10198
HTEFO28	1900	685383	AC006534	8744	1-119 151-982 1019-1286 1442-1755 1986-2137 2256-2608 2974-3413 4977-5488 5507-8584 8676-10198
HTEFO28	1900	685383	AC023123	8745	1-546 601-659
HTEFO28	1900	685383	AC006534	8746	1-230 234-264
HTEFO28	1900	685383	AC023123	8747	1-237 239-272
HTEFO28	1900	685383	AC006534	8748	1-546



					601-659
HTEET22	1906	675071	AC022930	8749	1-649 1562-2338 2374-2785 2850-2999
HTEET22	1906	675071	AC069217	8750	1-777 813-1224 1289-1366
HTEET22	1906	675071	AF238376	8751	1-38 1258-1452 3186-3304 3555-3746 6146-6232 8111-8262 9292-9751 10190-10839 11752-12528 12564-12975 13040-13189
HTEET22	1906	675071	AC022930	8752	1-460
HTEET22	1906	675071	AC022930	8753	1-405 1536-2405 2990-3484 3586-4386 4521-5187 5234-5265
HTEET22	1906	675071	AC069217	8754	1-402
HTEET22	1906	675071	AF238376	8755	1-408
HTEEF25	1907	677513	AC012330	8756	1-344
HTEEF25	1907	677513	AC008132	8757	1-344
HTEEF25	1907	677513	AC023491	8758	1-344
HTEEF25	1907	677513	AC008103	8759	1-583 683-2302 5090-5245 5708-5746 5973-6045
HTEEF25	1907	677513	AC023490	8760	1-582 682-2297
HTEEF25	1907	677513	AC008079	8761	1-583 683-2302 4878-5241 5704-5742 5969-6041
HTEEF25	1907	677513	AC007325	8762	1-583 683-2306 4881-5244 5707-5745

					5972-6044
HTEEF25	1907	677513	AC007708	8763	1-582 682-2297
HTEEF25	1907	677513	AC007324	8764	1-582 682-2301 5089-5244 5707-5745 5972-6044
HTEEF25	1907	677513	AC008018	8765	1-582 682-2301 4877-5240 5703-5741 5968-6040
HTEEF25	1907	677513	AC007981	8766	1-340
HTEEF25	1907	677513	AC008103	8767	1-603
HTEEF25	1907	677513	AC008103	8768	1-233
HTEEF25	1907	677513	AC023490	8769	1-603
HTEEF25	1907	677513	AC008079	8770	1-452 1155-1470 1497-1744 6815-7114 8000-8325 8749-9359 10364-10577 10586-10884 11714-12079 14576-14752 16955-17117 17240-17567 21365-21630 23483-23784 23982-24078 24280-24312 25597-25744 25952-26024 26254-26692 27187-27493 27543-27657 27931-28344 31056-31145 31243-31541 31698-31846 33652-33750 34559-34729 34936-35276 36328-36748 36956-37092

					37601-37650 38741-38979 40580-41206
HTEEF25	1907	677513	AC008079	8771	1-233
HTEEF25	1907	677513	AC007325	8772	1-603
HTEEF25	1907	677513	AC007325	8773	1-235
HTEEF25	1907	677513	AC007708	8774	1-603
HTEEF25	1907	677513	AC007324	8775	1-234
HTEEF25	1907	677513	AC007324	8776	1-603
HTEEF25	1907	677513	AC008018	8777	1-233
HTEEF25	1907	677513	AC008018	8778	1-603
HTEEF25	1907	677513	AC007981	8779	1-488
HTEEB82	1908	780161	AC026140	8780	1-81 1974-2064 2695-2852 2934-3354 4059-4360 4682-4800
HTEEB82	1908	780161	AL033531	8781	1-81 1974-2064 2695-2852 2934-3354 4059-4845
HTEEB82	1908	780161	AC026140	8782	1-212
HTEEB82	1908	780161	AL033531	8783	1-669
HTEEB82	1908	780161	AL033531	8784	1-212
HTEDX39	1909	530201	AC005726	8785	1-257
HTEDX39	1909	530201	AC005726	8786	1-124
HTEDX39	1909	530201	AC005726	8787	1-81 754-902 1011-1476 1836-2127 3328-3518 3715-3773 4307-4426 4516-4946 5049-5097 5496-5623 6425-6598
HTEDX04	1910	927850	AF111169	8788	1-136 1693-1823 1913-2092 2493-2707 4607-4680
HTEDX04	1910	927850	AF111169	8789	1-347
HTEDX03	1911	925353	AC005300	8790	1-202
HTEDX03	1911	925353	AC006946	8791	1-202

HTEDX03	1911	925353	AC006946	8792	1-168
HTEDW96	1912	881958	AC017028	8793	1-477 786-1004
HTEDW96	1912	881958	AC017028	8794	1-867
HTEDW59	1913	530448	AC025868	8795	1-217
HTEDW59	1913	530448	AC025868	8796	1-264 363-446
HTEDV86	1914	785818	AL356801	8797	1-763
HTEDV86	1914	785818	AL356801	8798	1-142
HTEDO75	1918	767024	AL049541	8799	1-910
HTEDJ92	1920	522827	AL390815	8800	1-295
HTEDI01	1923	961028	AC019205	8801	1-224
HTEDH30	1927	522936	AL049697	8802	1-57 1807-1921 2559-2625
HTEDH30	1927	522936	AL049697	8803	1-365 381-1034
HTEDH17	1928	522938	AC026124	8804	1-413
HTEDH17	1928	522938	AC012597	8805	1-413
HTEDH06	1929	869427	AC006251	8806	1-718 767-1512 1639-2023 2398-2655 2926-2990 3300-3357 4357-4395 5163-5275 5927-6337 6945-7074 7156-7444
HTEDH06	1929	869427	AC006251	8807	1-163 460-673 787-898 4433-4791 6955-7223 7246-7642 11004-11548 12185-12593 13374-13482 14491-14587 15381-16043 16395-16546 18407-18623 19528-19762 19852-20715 21495-21936
HTEDH06	1929	869427	AC006251	8808	1-400

HTEDF96	1932	614726	AC021163	8809	1-540 655-1021 1053-1143 1354-1536 1692-1762 1924-2030 2867-2962 3191-4078 4135-4228 4365-4458 4565-4675 4747-4815 4901-4977 5232-5675 6013-6910
HTEDF96	1932	614726	AC006942	8810	1-541 656-1023 1055-1145 1356-1538 1694-1764 1926-2032 3194-4081 4138-4231 4368-4461 4568-4678 4750-4818 4904-4980 5235-5678 6016-6914 7138-7281 7453-7737 7813-8322 8835-9123 9152-10108 10204-10288 10387-10448 11252-11414 11496-11676 11746-12218 12336-12436 13243-13426 13626-13767 13891-14067 14442-14596 15655-15742 16852-17292 17660-17764

					18610-18921 19197-19405 19407-19499 20302-20404 20510-20780 21329-21458
HTEDF96	1932	614726	AC021163	8811	1-288
HTEDF96	1932	614726	AC006942	8812	1-288
HTEDF22	1935	908406	AL138891	8813	1-822
HTEDF22	1935	908406	AC002418	8814	1-823
HTEDF22	1935	908406	AC004386	8815	1-823
HTEDF22	1935	908406	AL138891	8816	1-155
HTEDF22	1935	908406	AC002418	8817	1-142
HTECE66	1936	522997	AL159160	8818	1-61 5520-5850
HTECE66	1936	522997	AL390071	8819	1-61 620-770 5508-5838
HTECE66	1936	522997	AL390071	8820	1-259
HTECE62	1937	523002	AC069401	8821	1-158 259-547 1614-2136
HTECE62	1937	523002	AC005232	8822	1-158 259-547 1614-2136
HTECE51	1939	870723	AC016976	8823	1-301
HTECE51	1939	870723	AC058805	8824	1-301
HTECE51	1939	870723	AC027764	8825	1-301
HTECE51	1939	870723	AC016976	8826	1-425
HTECE51	1939	870723	AC027764	8827	1-425
HTECE31	1941	508104	AC069360	8828	1-283
HTECE31	1941	508104	AC023850	8829	1-283
HTECE31	1941	508104	AC069360	8830	1-409
HTECE31	1941	508104	AC023850	8831	1-409
HTECD94	1943	527210	AC025959	8832	1-58 828-1050 2944-3114 3238-3330
HTECD94	1943	527210	AC025963	8833	1-127 951-1008 1778-2000 3894-4064 4188-4280
HTECD94	1943	527210	AC009451	8834	1-127 951-1008 1781-2003 3897-4067

					4191-4283
HTECD94	1943	527210	AC025959	8835	1-151
HTECD94	1943	527210	AC025963	8836	1-151
HTECD94	1943	527210	AC009451	8837	1-151
HTECD88	1944	527214	AC024631	8838	1-560
HTECD88	1944	527214	AC017098	8839	1-560
HTECD88	1944	527214	AC024631	8840	1-263
HTECD88	1944	527214	AC017098	8841	1-869 1451-4175
HTECD88	1944	527214	AC024631	8842	1-869 1451-4174
HTECD88	1944	527214	AC017098	8843	1-263
HTECD70	1945	527203	AC013471	8844	1-243 3350-3433
HTECD65	1946	533795	AL157899	8845	1-119 4379-4589
HTECD65	1946	533795	AL137800	8846	1-119 4380-4590
HTECD65	1946	533795	AL157899	8847	1-489 540-886
HTECD65	1946	533795	AL137800	8848	1-489 540-2889
HTECD15	1948	523029	AC019082	8849	1-405
HTECD15	1948	523029	AC019082	8850	1-136 545-583 824-1177
HTECC71	1949	508142	AC060234	8851	1-364
HTECC45	1950	508124	AC034305	8852	1-320
HTECC45	1950	508124	AC034305	8853	1-539
HTECC26	1951	508144	AL158090	8854	1-168 2574-2660 3463-3623
HTECC09	1952	678659	AC069004	8855	1-91 238-330 1468-1597 1773-1835 2685-2851 2987-3081 3275-3440 4518-4928 6204-6550 6951-7273 7923-8577
HTECC09	1952	678659	AC069004	8856	1-816
HTECC08	1953	960439	AC008397	8857	1-436
HTECC08	1953	960439	AC008397	8858	1-314
HTECC08	1953	960439	AC008397	8859	1-555

HTECA39	1955	508132	AC036150	8860	1-412
HTECA39	1955	508132	AP001883	8861	1-412
HTECA39	1955	508132	AC036150	8862	1-496 541-1674
HTECA39	1955	508132	AP001883	8863	1-461
HTECA39	1955	508132	AC036150	8864	1-461
HTECA39	1955	508132	AP001883	8865	1-496 541-1674
HTEBJ02	1960	921321	AL031727	8866	1-1383
HTEBJ02	1960	921321	AL031727	8867	1-576
HTEAX06	1962	960792	AC015559	8868	1-949
HTEAX06	1962	960792	AC015559	8869	1-65 86-509 733-1178 2992-3574 4191-4337 4759-4850 6000-6163 6241-6337 6731-6852 6932-7048 7138-7271 8386-8513 9167-9300 9384-9468 9527-9830 10006-10582 11005-11153 11315-11469 11660-11810 14929-15256 15410-15569 16041-16200 16626-16799 17095-17498 17712-18272
HTEAX06	1962	960792	AC015559	8870	1-188 1981-2138 3446-3545 3751-3867 3900-4028 4262-4369
HTEAV22	1963	679394	AC016757	8871	1-1823
HTEAV22	1963	679394	AC016757	8872	1-1229 2106-2702 3129-4275
HTEAR93	1967	503298	AC009967	8873	1-411



					1914-2289 2844-2962 3628-4209 4664-4925 5258-5353
HTEAR93	1967	503298	AC009967	8874	1-241 348-492 1563-1872 1875-2138
HTEAR93	1967	503298	AC009967	8875	1-315
HTEAG47	1971	503623	AL139384	8876	1-939
HTEAG47	1971	503623	AL162711	8877	1-939 1988-2462 5032-5242
HTEAG47	1971	503623	AC011695	8878	1-939
HTEAG47	1971	503623	AL139384	8879	1-475
HTEAG47	1971	503623	AL162711	8880	1-310
HTEAG47	1971	503623	AL139384	8881	1-198
HTEAG47	1971	503623	AL162711	8882	1-198
HTEAG47	1971	503623	AC011695	8883	1-198
HTEAG47	1971	503623	AC011695	8884	1-475
HTEAG08	1972	960469	AC069236	8885	1-329
HTEAG08	1972	960469	AC069236	8886	1-454
HTEAB50	1973	724751	AL391056	8887	1-162 524-688 735-874 1577-1774 2049-2216 2395-2540 3191-3424
HTEAB50	1973	724751	AC007779	8888	1-162 524-688 749-849 1579-1776 2050-2217 2396-2541 3192-3425
HTEAB50	1973	724751	AC007779	8889	1-130
HSWBY36	1975	708291	AL122125	8890	1-465
HSWBY36	1975	708291	AL122125	8891	1-586
HSWBE29	1977	412991	AC016310	8892	1-1198
HSWBE29	1977	412991	AC016310	8893	1-531
HSWAS65	1978	953051	AC027146	8894	1-155 281-963 1320-2717
HSWAS65	1978	953051	AC027146	8895	1-2324 2582-2898

					3329-3548 4330-4523 4816-4920 5735-5913 7687-7814 8125-8911 9575-9620
HSWAS18	1979	666302	AC015734	8896	1-498
HSWAS18	1979	666302	AC015734	8897	1-1814
HSWAS18	1979	666302	AC015734	8898	1-626
HSWAR63	1980	471236	AC023572	8899	1-1010
HSWAR63	1980	471236	AC025630	8900	1-663
HSWAR63	1980	471236	AL158197	8901	1-1678
HSWAR63	1980	471236	AC010554	8902	1-1242 1316-3871 4275-5565 6216-6811 7004-7388 7749-8799 9220-10381 10766-12026 12271-13076
HSWAR63	1980	471236	AL158197	8903	1-260
HSWAR63	1980	471236	AC010554	8904	1-368
HPWSA52	1983	727294	AC023293	8905	1-1823 1896-2248 2687-2854 3435-3673 3752-3855 5351-5412 5579-5661 5664-6092 6986-7089 7968-8147
HPWSA52	1983	727294	AL035699	8906	1-1823 1896-2248 2687-2854 3433-3671 3750-3853 5349-5410 5577-5659 5662-6090 7966-8145
HPWSA52	1983	727294	AC023293	8907	1-1845 1919-2936
HPWSA52	1983	727294	AL035699	8908	1-1845 1919-2936

HPWDE86	1986	785710	AC021124	8909	1-1473 1741-2513 2636-3258 3403-3998 5728-6283 6454-6541 6613-7768 8422-8995 9025-9187 9699-10397 11541-11606 11644-11887 13552-14227 14437-15311 15960-16131 17491-17894 17906-18148 18243-20300
HPWDE86	1986	785710	AC008592	8910	1-1473 1741-2513 2636-3258 3403-3998 5728-6283 6454-6541 6613-7768 8422-8995 9025-9187 9699-10397 11541-11606 11644-11887 13577-14227 14437-15311 15960-16131 17491-17894 17906-18148 18243-22141
HPWDE86	1986	785710	AC008821	8911	1-1473 1741-2513 2636-3258 3403-3998 5729-6284 6455-6542 6614-7768 8422-8995 9025-9187 9699-10397 11540-11605

					11643-11886 13551-14226 14436-15310 15959-16130 17489-17892 17904-18146 18241-19429
HPWDE86	1986	785710	AC008924	8912	1-1473 1741-2513 2636-3258 3403-3997 5728-6283 6454-6541 6613-7768 8422-8995 9025-9187 9699-10397 11541-11606 11644-11887 13577-14227 14437-15311 15960-16131 17491-17894 17906-18148 18243-22140
HPWDE86	1986	785710	AC021124	8913	1-1496
HPWDE86	1986	785710	AC008592	8914	1-1495
HPWDE86	1986	785710	AC008821	8915	1-1495
HPWDE86	1986	785710	AC008924	8916	1-1495
HPWCJ90	1987	789170	AC024191	8917	1-42 1672-1837 2662-3033 4555-4909 5629-6051
HPWCJ90	1987	789170	AC024191	8918	1-636
HPWCJ90	1987	789170	AC024191	8919	1-109
HPWBF35	1989	707514	AC018476	8920	1-347
HPWBF35	1989	707514	AC007949	8921	1-1359
HPWBF35	1989	707514	AC018477	8922	1-345
HPWAT23	1991	676323	AC068550	8923	1-851 939-1165 1537-2159 2587-2619
HPWAT23	1991	676323	AC007933	8924	1-304
HPWAT23	1991	676323	AC015912	8925	1-851 939-1165 1537-2159

					2587-2619
HPWAT23	1991	676323	AC068550	8926	1-532
HPWAT23	1991	676323	AC068550	8927	1-479
HPWAT23	1991	676323	AC007933	8928	1-532
HPWAT23	1991	676323	AC015912	8929	1-532
HPWAT23	1991	676323	AC007933	8930	1-482
HPWAT23	1991	676323	AC015912	8931	1-479
HPWAJ85	1992	535157	Z95115	8932	1-808 845-2003
HPWAJ85	1992	535157	Z95115	8933	1-123 1133-1262 2633-2792 3108-3261 4574-5008 5437-5789 6397-6617 6951-7387 8434-8511 8730-8794
HPWAJ85	1992	535157	Z95115	8934	1-693
HPWAJ39	1993	575271	AC073177	8935	1-315
HPWAJ39	1993	575271	AC016905	8936	1-319
HPWAJ39	1993	575271	AC016905	8937	1-258
HPWAJ39	1993	575271	AC016905	8938	1-719
HPWAI05	1994	932627	AC017006	8939	1-564
HPWAI05	1994	932627	AC017006	8940	1-375
HPWAG31	1996	693618	AC018695	8941	1-470
HPWAG31	1996	693618	AC009068	8942	1-463
HPWAG31	1996	693618	AC018695	8943	1-129
HPWAG31	1996	693618	AC009068	8944	1-129
HPVAH71	1997	829301	AC021225	8945	1-2009
HPVAH71	1997	829301	AC007881	8946	1-1775 1871-3872
HPVAH71	1997	829301	AC007881	8947	1-101
HPVAH71	1997	829301	AC007881	8948	1-179 1488-2112 2156-3167
HPVAH41	1998	848632	AC023055	8949	1-817 1052-1362 1416-1580 1660-1798 1995-2102 2315-5348 6011-6166 6325-6676 6848-7254 7391-7453

HPVAH41	1998	848632	AC023055	8950	1-300
HPVAH41	1998	848632	AC023055	8951	1-646
HPRTI54	2003	728812	AC074120	8952	1-963
HPRTI54	2003	728812	AP001818	8953	1-963
HPRTI54	2003	728812	AC074120	8954	1-738
HPRTI54	2003	728812	AP001818	8955	1-1024
HPRTI16	2004	667652	AL109928	8956	1-55 140-468 845-1039 2611-3094 3270-3416 5144-5386 6727-6949 7289-7483 7526-7651 10478-10559 13709-13761 13774-14390 15428-15686 17608-17682 23419-24008
HPRTI16	2004	667652	AL109928	8957	1-200
HPRTI16	2004	667652	AL109928	8958	1-131 2091-2573
HPRCV66	2005	320393	AC007377	8959	1-1104 1155-1427 4071-4160 4296-4421
HPRCV66	2005	320393	AC010447	8960	1-792 1169-1441 3979-4068 4204-4329
HPRCV66	2005	320393	AC007377	8961	1-618
HPRCV66	2005	320393	AC010447	8962	1-525
HPRCV66	2005	320393	AC007377	8963	1-525
HPRCV66	2005	320393	AC010447	8964	1-618
HPRCT83	2006	780264	AC007182	8965	1-1014 4968-5234 5805-6546 7479-8153 9443-9916 13555-13984 16814-17618 18231-18666 21045-21485 22412-23012 23014-23411

					24103-24320 31987-32500 37576-37704 39352-39698 40342-40425 43454-43595 43627-44110 44718-45133 45471-45741 45986-46107
HPRCT83	2006	780264	AC007182	8966	1-323
HPRCT83	2006	780264	AC007182	8967	1-476
HPRCN03	2007	925420	AC004056	8968	1-529
HPRCN03	2007	925420	AC004056	8969	1-384
HPRCN03	2007	925420	AC004056	8970	1-270
HPRCL72	2009	766311	AF276255	8971	1-107 198-359 2503-3020 5027-6174
HPRCL72	2009	766311	AC015709	8972	1-107 198-359 2503-3020 5026-6173
HPRCD11	2012	967762	AC010645	8973	1-1261
HPRCD11	2012	967762	AC010645	8974	1-763 1255-1379
HPRCD11	2012	967762	AC010645	8975	1-1412
HPRCC22	2013	526623	AL158815	8976	1-258 1168-1273 1506-1763 3756-5057 5749-5893 6020-10468
HPRCC22	2013	526623	AC012634	8977	1-2422
HPRCC22	2013	526623	AC005601	8978	1-2422
HPRCC22	2013	526623	AL035587	8979	1-258 1168-1273 1493-1763 3756-5492 5749-5893 6020-10468
HPRCC22	2013	526623	AL158815	8980	1-306
HPRCC22	2013	526623	AL158815	8981	1-606
HPRCC22	2013	526623	AC012634	8982	1-240
HPRCC22	2013	526623	AC012634	8983	1-435
HPRCC22	2013	526623	AC005601	8984	1-240
HPRCC22	2013	526623	AC005601	8985	1-435

HPRCC22	2013	526623	AL035587	8986	1-606
HPRCC22	2013	526623	AL035587	8987	1-296
HPRBI87	2016	695116	AC012618	8988	1-1525
HPRBI87	2016	695116	AC062036	8989	1-134 343-404 622-764 1703-1852 1920-4557 5206-5421
HPRBI87	2016	695116	AC062036	8990	1-316
HPRBH80	2017	781636	AC068212	8991	1-851
HPRBH80	2017	781636	AC004582	8992	1-851
HPRBH80	2017	781636	AC068212	8993	1-227 1252-1834
HPRBH80	2017	781636	AC004582	8994	1-227 1252-1810
HPRAV80	2018	781637	AC019071	8995	1-173 594-708 1259-1460 1857-2014 2036-2449 3537-3910 5801-8095 8166-9964 10231-10812
HPRAV80	2018	781637	AC019071	8996	1-440
HPRAN50	2020	724753	AC011244	8997	1-377
HPRAN50	2020	724753	AL161433	8998	1-348
HPRAN50	2020	724753	AL009030	8999	1-377
HPRAN50	2020	724753	AL133255	9000	1-348
HPRAN50	2020	724753	AL157879	9001	1-350
HPRAN50	2020	724753	AL161433	9002	1-627
HPRAN50	2020	724753	AL009030	9003	1-573
HPRAN50	2020	724753	AL133255	9004	1-572
HPRAN50	2020	724753	AL157879	9005	1-572
HPRAG73	2022	764757	AC009985	9006	1-867 902-1299
HPRAG73	2022	764757	AC009985	9007	1-370
HPRAF86	2024	784594	AC018494	9008	1-604
HPRAF86	2024	784594	AC018494	9009	1-435
HPMSH94	2026	796839	AP001033	9010	1-609
HPMSH94	2026	796839	AC015955	9011	1-616
HPMSH94	2026	796839	AP001033	9012	1-324
HPMSH94	2026	796839	AC015955	9013	1-96 643-1148 1742-2072 2248-2716



					3978-4071 5368-8195
HPMSH94	2026	796839	AC015955	9014	1-314
HPMSB35	2027	707476	AC069240	9015	1-655 693-1132 1637-1983 2129-2540
HPMSB35	2027	707476	AL080279	9016	1-655 693-1132 1637-1983 2129-2540
HPMSB35	2027	707476	AC069240	9017	1-69 154-406 641-789 1249-1488 1646-2009
HPMSB35	2027	707476	AL080279	9018	1-277
HPMSB35	2027	707476	AC069240	9019	1-277
HPMSB35	2027	707476	AL080279	9020	1-69 154-406 641-789 1249-1488 1646-2009
HPMMK05	2028	928283	AP001265	9021	1-799
HPMMK05	2028	928283	AP000751	9022	1-25 577-1096 1319-5338
HPMMK05	2028	928283	AP001265	9023	1-1848
HPMMK05	2028	928283	AP000751	9024	1-384
HPMMK05	2028	928283	AP000751	9025	1-1849
HPMMB08	2029	957945	AL121918	9026	1-759 870-1328
HPMMB08	2029	957945	AC021670	9027	1-759 870-1328
HPMMB08	2029	957945	AL121918	9028	1-414
HPMMB08	2029	957945	AC021670	9029	1-533
HPMKP06	2030	933895	AC034210	9030	1-462
HPMKP06	2030	933895	AC018791	9031	1-1961
HPMKP06	2030	933895	AC016627	9032	1-1961
HPMKP06	2030	933895	AC018791	9033	1-448
HPMKP06	2030	933895	AC016627	9034	1-448
HPMKC05	2031	930874	AC009966	9035	1-821
HPMKC05	2031	930874	AC009966	9036	1-115
HPMKC05	2031	930874	AC009966	9037	1-512
HPMJT12	2032	969483	AC009622	9038	1-109 530-1348 1382-1410

HPMJT12	2032	969483	AF216667	9039	1-819
HPMJT12	2032	969483	AF257497	9040	1-135 539-1357 1391-1419
HPMJT12	2032	969483	AF216667	9041	1-89
HPMJK11	2034	965636	AF252825	9042	1-518
HPMJ11	2036	965627	AL162379	9043	1-271 419-828 1228-1729 4082-4171
HPMJ11	2036	965627	AL162379	9044	1-161
HPMJE06	2037	939682	AC025006	9045	1-811
HPMJE06	2037	939682	AC025006	9046	1-549 558-731 1577-1719
HPMJE06	2037	939682	AC025006	9047	1-293
HPMGO88	2041	463906	AC023389	9048	1-466
HPMGO88	2041	463906	AC023389	9049	1-465
HPMGO88	2041	463906	AC022169	9050	1-466
HPMGO88	2041	463906	AC022169	9051	1-986
HPMGO88	2041	463906	AC022169	9052	1-998
HPMGJ16	2043	662021	AC023508	9053	1-219
HPMGJ16	2043	662021	AC023508	9054	1-670
HPMFL73	2046	867670	AC005103	9055	1-940
HPMFL73	2046	867670	AF047825	9056	1-940
HPMFL73	2046	867670	AC005103	9057	1-770
HPMFL73	2046	867670	AC005103	9058	1-88
HPMFL73	2046	867670	AF047825	9059	1-770
HPMFC02	2047	920327	AL365261	9060	1-853
HPMFB26	2048	867674	AC004873	9061	1-345 484-2275
HPMFB26	2048	867674	AL034380	9062	1-345 484-2275
HPMFB26	2048	867674	AL034380	9063	1-768 1259-1628 1650-2209 2292-2397 2433-2587 2660-2791 3615-3861 3936-4479 4621-4806 6158-6592 6828-6934 7507-8214 8433-9310 10436-11557

HPMFB26	2048	867674	AC004873	9064	1-768 1259-1628 1650-2209 2292-2397 2433-2587 2694-2801 3604-3858 3936-4479 4608-4872 6158-6592 7507-8214 8433-9310 10436-11557
HPMEG77	2049	772503	AL135793	9065	1-124 3436-4154 4447-5170
HPMEG77	2049	772503	AL135793	9066	1-142
HPMDP10	2051	968350	AL109754	9067	1-170 1357-1493 2395-3335
HPMDP10	2051	968350	AL109754	9068	1-317
HPMDF06	2052	954567	AC068644	9069	1-1496
HPMDF06	2052	954567	AC068644	9070	1-474
HPMAH85	2060	783344	AC018870	9071	1-492
HPMAH85	2060	783344	AC018515	9072	1-490
HPMAH85	2060	783344	AC018870	9073	1-355
HPMAH85	2060	783344	AC018515	9074	1-355
HPMAH56	2061	867711	AC019225	9075	1-393
HPMAH56	2061	867711	AL355990	9076	1-393
HPMAH56	2061	867711	AL137790	9077	1-393
HPMAH56	2061	867711	AC010535	9078	1-393
HPMAH56	2061	867711	AC019225	9079	1-195
HPMAH56	2061	867711	AL137790	9080	1-195
HPMAH56	2061	867711	AC010535	9081	1-195
HPLBW22	2063	679217	AL390760	9082	1-405 509-556 1117-1214
HPLBW22	2063	679217	AL390760	9083	1-870
HPLBW22	2063	679217	AL390760	9084	1-372
HPLBT54	2065	731065	AC027620	9085	1-604
HPLBT54	2065	731065	AC027620	9086	1-218
HPLBT53	2066	728517	AL096838	9087	1-693 1224-1924
HPLBT53	2066	728517	AL117391	9088	1-693 1224-1924
HPLBT53	2066	728517	AL096838	9089	1-131
HPLBT53	2066	728517	AL117391	9090	1-131

HPLBT53	2066	728517	AL096838	9091	1-439
HPLBT53	2066	728517	AL117391	9092	1-439
HPLBS41	2067	712707	AL158203	9093	1-573 882-1629 1937-3057 3512-5443
HPLBO90	2069	787208	AC010997	9094	1-886
HPLBO90	2069	787208	AL390034	9095	1-886
HPLBO90	2069	787208	AC010997	9096	1-211
HPLBN79	2070	781854	AC019175	9097	1-925
HPLBN79	2070	781854	AL356738	9098	1-925
HPLBN79	2070	781854	AC019175	9099	1-523
HPLBN79	2070	781854	AL356738	9100	1-300
HPLBN79	2070	781854	AC019175	9101	1-300
HPLBN79	2070	781854	AL356738	9102	1-1556 2168-2385
HPLAX14	2072	727885	AC005073	9103	1-447 940-1180 1852-2062 2064-2154 2609-2977 3455-4244 4796-5220 6485-6924 8360-8685 8734-9287 9704-10448 11084-12000 12226-13392 13703-13772 13805-14443 14470-14888 15137-16367 16448-17023 17096-17156 17259-18000 18350-18690 18962-19128 19420-19573 19792-20077 20124-22431 22573-23150 23223-23837 24074-24172 24218-24750 24811-25121 26008-27281

					27312-27680 27891-28841 29378-29581 31206-31718
HPLAX14	2072	727885	AC005071	9104	1-447 1852-2062 2064-2154 2609-2977 3455-4244 4796-5218 6593-6924 9903-10133 11084-12000 12226-13392 13703-13772 13805-14443 14470-14888 15137-16367 16448-17010 17096-17156 17259-18000 18350-18690 18962-19128 19420-19573 19792-20077 20124-22431 22573-23150 23223-23837 24074-24172 24218-24750 24819-25110 26008-27281 27312-27680 27891-28841 29378-29581 31206-31718
HPLAX14	2072	727885	AC005073	9105	1-853
HPLAX14	2072	727885	AC005073	9106	1-3333 3556-3754 3816-7381 7384-7601 7635-8330 8572-8879 8917-9030 9088-9191 9671-9908 9911-13281

					13403-13828 14157-15040 15737-16040 16205-16293 17878-18795 19197-19455 19962-21676
HPLAX14	2072	727885	AC005071	9107	1-3015 3238-3428 3498-7063 7066-7283 7317-8012 9349-12963 13085-13595 13839-14722 15397-15722 15887-15975 17560-18477 18879-19130 19644-21358
HPLAX14	2072	727885	AC005071	9108	1-1300
HPLAV44	2073	715732	AC010645	9109	1-1261
HPLAV44	2073	715732	AC010645	9110	1-125 617-1379
HPLAV44	2073	715732	AC010645	9111	1-1412
HPJFA10	2075	963322	AC009299	9112	1-607
HPJFA10	2075	963322	AC009299	9113	1-465
HPJFA10	2075	963322	AC009299	9114	1-475
HPJEV95	2076	929723	AL359456	9115	1-711
HPJEV95	2076	929723	AL390724	9116	1-633
HPJEV95	2076	929723	AL390724	9117	1-368
HPJEV95	2076	929723	AL359456	9118	1-1365
HPJET11	2078	965894	AP001270	9119	1-961
HPJET11	2078	965894	AP001270	9120	1-344
HPJET11	2078	965894	AP001270	9121	1-427
HPJES17	2079	859867	AP001857	9122	1-444
HPJES17	2079	859867	AC015703	9123	1-444
HPJES17	2079	859867	AP001857	9124	1-54 1030-1290
HPJEL02	2080	918315	AC025014	9125	1-1195 1827-2531 4783-5133 5139-5379 5902-6081 6463-7267 7466-7724 8041-8216

					8269-9037 9310-10364 10545-10988 11353-12100
HPJEL02	2080	918315	AC011850	9126	1-416 1048-1381 4025-4374 4380-4621 5927-6305
HPJEL02	2080	918315	AC011850	9127	1-334
HPJEL02	2080	918315	AC020590	9128	1-397
HPJEL02	2080	918315	AL162451	9129	1-416 1052-1446 2106-2304 4264-4614 4620-4861 5947-6495
HPJEL02	2080	918315	AC012661	9130	1-396
HPJEL02	2080	918315	AC011850	9131	1-660
HPJEL02	2080	918315	AC025014	9132	1-1181
HPJEL02	2080	918315	AC011850	9133	1-247
HPJEL02	2080	918315	AL162451	9134	1-249
HPJEL02	2080	918315	AC020590	9135	1-659
HPJEL02	2080	918315	AC012661	9136	1-486
HPJEG53	2081	974074	AC006137	9137	1-508
HPJEG53	2081	974074	AL050328	9138	1-508
HPJEG53	2081	974074	AC006137	9139	1-266 1353-1457 1654-1954
HPJEG53	2081	974074	AL050328	9140	1-323 1647-1959
HPJDT03	2083	922815	AC009143	9141	1-459
HPJDT03	2083	922815	AC009123	9142	1-459 3173-3221 5754-6155
HPJDP54	2084	949149	AC022608	9143	1-531
HPJDP54	2084	949149	AC021472	9144	1-531
HPJDP54	2084	949149	AC069078	9145	1-531
HPJDP54	2084	949149	AC022608	9146	1-301
HPJDP54	2084	949149	AC022608	9147	1-537
HPJDP54	2084	949149	AC021472	9148	1-1124
HPJDP54	2084	949149	AC021472	9149	1-301
HPJDP54	2084	949149	AC069078	9150	1-1124
HPJDP54	2084	949149	AC069078	9151	1-301
HPJDC01	2086	915056	AL357517	9152	1-607
HPJDC01	2086	915056	AL356792	9153	1-607

HPJDC01	2086	915056	AL357517	9154	1-532
HPJDC01	2086	915056	AL357517	9155	1-221
HPJDC01	2086	915056	AL356792	9156	1-532
HPJDC01	2086	915056	AL356792	9157	1-221
HPJCT81	2089	494874	AC068243	9158	1-652
HPJCT81	2089	494874	AC068243	9159	1-119
HPJCT81	2089	494874	AC068243	9160	1-420
HPJCT26	2090	559949	AC022064	9161	1-130 781-1384 3527-3569
HPJCT26	2090	559949	AC022064	9162	1-198
HPJCS73	2091	975087	AC008013	9163	1-751 869-1288 1741-2134 3713-4192 4219-4525 5032-5188 6221-6459 7627-7887 8458-9081 9227-9966 10464-10713 11232-11320 11620-11777 11791-12453 12643-13059 14536-14632 15693-16508 16536-17099 17433-17823 18365-18520 19494-19542 19895-20386 20452-21075 21128-21475 22370-22928 22994-23030
HPJCS73	2091	975087	AC009533	9164	1-221 367-759 1212-1606 3182-3992 4509-4666 4820-4982 5711-5948 7122-7382 7953-8576 8722-9484



					9977-10227 10746-10834 11133-11288 11304-11966 12156-12572 14044-14140 14735-15547 15575-16138 16472-16862 17405-17560 18541-18589 18938-19448 20178-20525 21420-21971 22037-22073 22331-22434 22548-22685 22842-23316 23334-23726 25414-26133 26228-26338 26375-26622 26657-26756 27017-27239 27287-27340 27456-27676 27850-28149 28593-28639 28670-29013 29189-29345 29359-30420
HPJCS73	2091	975087	AC008013	9165	1-294
HPJCS73	2091	975087	AC008013	9166	1-106 220-357 575-1050 1060-1459 3153-3870 3965-4359 4392-4496 4756-4977 5025-5078 5198-5418 5593-5895 6301-6763 6941-8173 8913-9547 9927-10355

					10651-11058 11461-11749
HPJCS73	2091	975087	AC009533	9167	1-636
HPJCS32	2093	699046	AC024922	9168	1-274
HPJCS32	2093	699046	AC024922	9169	1-274
HPJCL55	2095	670083	AC068280	9170	1-895
HPJBS35	2100	867818	AC016276	9171	1-431
HPJBS35	2100	867818	AC015557	9172	1-436
HPJBS35	2100	867818	AC015557	9173	1-495
HPJBL76	2101	769889	AC007066	9174	1-1543
HPJBL76	2101	769889	AC018466	9175	1-1543
HPJBL76	2101	769889	AC007066	9176	1-785
HPJBL76	2101	769889	AC007066	9177	1-1761
HPJBL76	2101	769889	AC018466	9178	1-1761
HPJBL76	2101	769889	AC018466	9179	1-785
HPJBK25	2103	974606	AC005077	9180	1-540
HPJBK25	2103	974606	AC005077	9181	1-124
HPJBK14	2104	974593	AC005202	9182	1-604
HPJBK14	2104	974593	AC005202	9183	1-98
HPJBH45	2105	717088	AC073089	9184	1-681
HPJBH45	2105	717088	AC006480	9185	1-681
HPJBH45	2105	717088	AC073089	9186	1-238
HPJBH45	2105	717088	AC006480	9187	1-218
HPJBH45	2105	717088	AC006480	9188	1-493
HPJAU73	2107	806718	AC011689	9189	1-1216
HPJAU73	2107	806718	AC078939	9190	1-1496
HPJAU73	2107	806718	AC011043	9191	1-712 904-1867 1874-1906 2000-2124 2337-3891
HPJAU73	2107	806718	AC011841	9192	1-710 902-1864 1997-2121 2334-3824 4232-5905
HPJAU73	2107	806718	AC078939	9193	1-646 837-1797 1804-1836 1930-3820 4161-5834
HPJAU73	2107	806718	AC078939	9194	1-1358
HPJAU73	2107	806718	AC011043	9195	1-105
HPJAU73	2107	806718	AC078939	9196	1-906
HPJAU73	2107	806718	AC011841	9197	1-541
HPJAU73	2107	806718	AC011841	9198	1-105

HPJAU73	2107	806718	AC078939	9199	1-564
HPJAU73	2107	806718	AC078939	9200	1-105
HPJAP92	2108	887830	AL353687	9201	1-430
HPJAP92	2108	887830	Z97832	9202	1-430
HPJAP92	2108	887830	AL353687	9203	1-262
HPJAP92	2108	887830	Z97832	9204	1-262
HPJAN69	2110	754858	AC025957	9205	1-345
HPJAN67	2111	751384	AL139244	9206	1-161 1052-1592 3665-4095 4361-4549
HPJAN67	2111	751384	AC004962	9207	1-83 719-835 1648-1811 2702-3242 5315-5745 6011-6199
HPJAN67	2111	751384	AL139244	9208	1-506
HPJAN67	2111	751384	AC004962	9209	1-1876
HPJAN57	2112	734503	AC007747	9210	1-433
HPJAN57	2112	734503	AL158136	9211	1-433
HPJAN57	2112	734503	AC007747	9212	1-623
HPJAN57	2112	734503	AL158136	9213	1-623
HPJAJ20	2113	669000	AP000584	9214	1-564 648-2086 3513-3644
HPJAJ20	2113	669000	AC011256	9215	1-564 648-2086 3514-3645
HPJAJ20	2113	669000	AP000588	9216	1-564 648-2086 3513-3644
HPJAJ20	2113	669000	AP002815	9217	1-564 648-2086 3513-3644
HPJAJ20	2113	669000	AP000584	9218	1-386
HPJAJ20	2113	669000	AC011256	9219	1-386
HPJAJ20	2113	669000	AP000588	9220	1-386
HPJAJ20	2113	669000	AP002815	9221	1-386
HPJAE51	2114	725761	AL353654	9222	1-392 842-1387
HPJAE51	2114	725761	AC004842	9223	1-392 842-1387
HPJAE51	2114	725761	AL035696	9224	1-392 842-1387
HPJAE51	2114	725761	AL353654	9225	1-169 179-295

HPJAE51	2114	725761	AC004842	9226	1-168 178-294
HPJAE51	2114	725761	AL035696	9227	1-162
HPJAA27	2115	419786	AC074007	9228	1-531
HPJAA27	2115	419786	AL356953	9229	1-531
HPJAA27	2115	419786	AC018896	9230	1-531
HPICG93	2116	887817	AL356975	9231	1-447
HPICG93	2116	887817	AL357812	9232	1-423
HPIBT62	2119	743135	AC068150	9233	1-62 2884-2997 3285-3503 4212-4325 5273-5353 7542-7640 7721-8853
HPIBT62	2119	743135	AC068150	9234	1-766
HPIBO89	2120	786741	AL355102	9235	1-98 763-882 1106-1289 1883-2041 2351-2629 3424-3590 4426-4726 5712-8082
HPIBO89	2120	786741	AL355102	9236	1-101 1847-2078
HPIBO89	2120	786741	AL355102	9237	1-2260
HPIBI89	2121	867845	AC009696	9238	1-149 511-650 806-1203 1520-2566 2570-2737 3468-3611 3880-4009 4098-4206
HPIBC93	2123	785971	Z97630	9239	1-418 2009-2216 2619-2865 3398-3578 4946-5048 5089-5669 7182-7343 7476-7560 7718-7895 7913-8163 8257-8378 8422-8957

HPIBC93	2123	785971	Z97630	9240	1-2182
HPIBB45	2124	867850	AL110504	9241	1-5312
HPIBB32	2126	698901	AC040962	9242	1-323
HPIBB32	2126	698901	AL161903	9243	1-415
HPIBB32	2126	698901	AL021366	9244	1-415
HPIBB32	2126	698901	AL050332	9245	1-415
HPIBB32	2126	698901	AL161903	9246	1-183
HPIBB32	2126	698901	AC040962	9247	1-111
HPIBB32	2126	698901	AL161903	9248	1-111
HPIBB32	2126	698901	AL021366	9249	1-194
HPIBB32	2126	698901	AL021366	9250	1-111
HPIBB32	2126	698901	AL050332	9251	1-111
HPIBB32	2126	698901	AL050332	9252	1-194
HPIAW91	2128	790033	AC004200	9253	1-719
HPIAW91	2128	790033	AC011858	9254	1-719
HPIAW91	2128	790033	AB023056	9255	1-719
HPIAV06	2129	935111	AC008542	9256	1-41 499-841 945-1795 1847-2073 2214-2453 3031-3131 3396-4444 4470-5202 5863-6644 7027-7181 7474-7771 7857-8016 8110-8448
HPIAV06	2129	935111	AC023788	9257	1-71 998-1207 4649-5094 5184-5215 5490-5821 6192-6604 6708-6745 6917-7852 7993-8232 8809-8909 9174-10222 10248-10976 11637-12418 12801-12955 13248-13545 13631-13790 13884-14221
HPIAV06	2129	935111	AC008404	9258	1-446

					537-568 843-1166 1553-1961 2065-2915 2967-3193 3334-3573 4515-5563 5589-6320 6980-7761 8144-8298 8591-8888 8974-9133 9227-9566
HPIAV06	2129	935111	AC008404	9259	1-393
HPIAV06	2129	935111	AC023788	9260	1-393
HPIAQ70	2130	973604	AC008751	9261	1-930
HPHSB91	2133	790313	AC069100	9262	1-331
HPHSB91	2133	790313	AC069100	9263	1-101
HPHSA94	2135	793084	AC068386	9264	1-278
HPHSA94	2135	793084	AC017015	9265	1-278
HPHSA94	2135	793084	AC068386	9266	1-269
HPHSA94	2135	793084	AC017015	9267	1-267
HPHSA94	2135	793084	AC017015	9268	1-557
HPFMG06	2137	933696	AL138904	9269	1-474 705-1039 1625-1999
HPFMG06	2137	933696	AL354990	9270	1-474 705-1039 1625-1999
HPFMG06	2137	933696	AL138904	9271	1-511
HPFMG06	2137	933696	AL354990	9272	1-511
HPFMG06	2137	933696	AL138904	9273	1-210
HPFMG06	2137	933696	AL354990	9274	1-210
HPFMB10	2138	961758	AC016135	9275	1-845
HPFMB10	2138	961758	AC018512	9276	1-776
HPFDX38	2139	709302	AC023631	9277	1-2429
HPFDX38	2139	709302	AC011962	9278	1-2428
HPFCZ82	2140	780198	AC048350	9279	1-900
HPFCZ82	2140	780198	AC037193	9280	1-876
HPFCZ82	2140	780198	AC008042	9281	1-688 1078-1977
HPFCZ82	2140	780198	AC037193	9282	1-128 961-991 4864-5402
HPFCZ82	2140	780198	AC037193	9283	1-688
HPFCZ60	2141	430125	AC010611	9284	1-694
HPFCZ60	2141	430125	AC010255	9285	1-694

HPFCZ60	2141	430125	AC010611	9286	1-190
HPFCZ60	2141	430125	AC010255	9287	1-190
HPFCZ10	2142	968360	AC024493	9288	1-337
HPFCZ10	2142	968360	AL359983	9289	1-337
HPFCZ10	2142	968360	AL357555	9290	1-337
HPFCP53	2145	526574	AC023329	9291	1-101
HPFCP53	2145	526574	AC069380	9292	1-238
HPFCP53	2145	526574	AL162583	9293	1-130
HPFCL56	2148	732601	AC027270	9294	1-154 744-867 1696-1817 1958-2117 2143-2244 3812-3907 4266-4379 4520-4734 4822-4936 5686-5748 5820-5952 6060-6191 7271-8847 9423-9518 10087-10163 10751-10891 12158-12252 12330-12717 13997-14286 14515-14846 14946-15228 16306-16744 16881-17380 18392-18826 19323-19437 19503-20654 20746-21268 21327-21815 22145-22695 22742-23675 23977-24173
HPFCL56	2148	732601	AP002748	9295	1-551 598-1452
HPFCL56	2148	732601	AC027270	9296	1-154
HPFCL56	2148	732601	AP002748	9297	1-196
HPFCL56	2148	732601	AC027270	9298	1-282
HPFCA01	2151	928672	AC005531	9299	1-873
HPFCA01	2151	928672	AC073184	9300	1-873
HPFCA01	2151	928672	AC005531	9301	1-934

HPFCA01	2151	928672	AC073184	9302	1-934
HPELD12	2152	969248	AC000384	9303	1-73 373-694 880-951 1368-1531 1991-2111 2578-2725 3044-3210 4123-4292 4550-4761
HPELD12	2152	969248	AC000384	9304	1-765 1018-1580
HPEKI04	2153	926104	AC009985	9305	1-506 515-927 977-1407
HPEKI04	2153	926104	AC010794	9306	1-506 515-927 977-1407
HPEKI04	2153	926104	AC009985	9307	1-540
HPEKI04	2153	926104	AC010794	9308	1-540
HPEKI04	2153	926104	AC009985	9309	1-156
HPEKI04	2153	926104	AC010794	9310	1-156
HPEKE01	2154	914414	AC055804	9311	1-528
HPEKE01	2154	914414	AL357976	9312	1-528
HPEKE01	2154	914414	AC055804	9313	1-352
HPEKE01	2154	914414	AL357976	9314	1-231
HPEKE01	2154	914414	AC055804	9315	1-176
HPEKE01	2154	914414	AL357976	9316	1-352
HPEBT82	2155	524246	AC018865	9317	1-466
HPEBT82	2155	524246	AC018865	9318	1-128
HPEBT49	2159	530021	AC046171	9319	1-373
HPEBT49	2159	530021	AC046171	9320	1-209 1274-1611
HPEBT49	2159	530021	AC046171	9321	1-208
HPEBT34	2160	706836	AC009677	9322	1-360
HPEBT14	2161	535061	AL358573	9323	1-245
HPEBT14	2161	535061	AL139113	9324	1-246
HPEBT14	2161	535061	AL358573	9325	1-576
HPEBT14	2161	535061	AL139113	9326	1-576
HPEBL08	2164	960240	AC007684	9327	1-38 2047-2188 2599-2984 3134-4018 4336-4377 4685-4800 6534-6618 8404-8480



					8739-8851 12237-12815 14345-14412 14489-14605 15097-15445 15469-15664 16908-17608 18139-18250 19641-19696
HPEBL08	2164	960240	AC007684	9328	1-1190
HPEBL08	2164	960240	AC007684	9329	1-394 429-990 1194-1451
HPEBG10	2167	867888	AL356133	9330	1-293
HPEBG10	2167	867888	AL356133	9331	1-503
HPEBA61	2169	742251	AC007036	9332	1-78
HPEBA61	2169	742251	AC007036	9333	1-225
HPEBA05	2170	928027	AC026647	9334	1-379
HPEBA05	2170	928027	AL359754	9335	1-374 1483-1516
HPEBA05	2170	928027	AL159175	9336	1-374 1483-1516
HPEBA05	2170	928027	AL359754	9337	1-673
HPEBA05	2170	928027	AC026647	9338	1-672
HPEBA05	2170	928027	AL159175	9339	1-673
HPEAA57	2174	514231	AC018662	9340	1-784 890-1375 1837-2156 2324-2766 3080-3286 4028-4155 4903-5424 5721-6302 6782-7063 7153-7571 7923-8053 11271-11598
HPEAA57	2174	514231	AC008039	9341	1-784 890-1375 1837-2156 2324-2766 3080-3286 4028-4155 4905-5426 5723-6304 6784-7065 7155-7573

					7925-8055 11273-11600
HPEAA57	2174	514231	AC018662	9342	1-419
HPEAA57	2174	514231	AC008039	9343	1-418
HPDWR11	2176	965249	AC016344	9344	1-647
HPDWR11	2176	965249	AC018796	9345	1-643
HPDWR11	2176	965249	AC010857	9346	1-643
HPDWR11	2176	965249	AC018796	9347	1-422
HPDWR11	2176	965249	AC010857	9348	1-422
HPDWN05	2177	928563	AC009871	9349	1-599 896-1375
HPDWN05	2177	928563	AC009812	9350	1-599 896-1375
HPDWN05	2177	928563	AC009871	9351	1-99
HPDWN05	2177	928563	AC009871	9352	1-4119
HPDWN05	2177	928563	AC009812	9353	1-99
HPDWN05	2177	928563	AC009812	9354	1-74 277-452 718-5961
HPDRR06	2181	968601	AC073389	9355	1-1034
HPDRR06	2181	968601	AL359074	9356	1-92 1559-2178 2181-3214
HPDRR06	2181	968601	AC073389	9357	1-615
HPDRR06	2181	968601	AL359074	9358	1-652
HPDRR06	2181	968601	AL359074	9359	1-465 596-748 790-866
HPDRN07	2182	951838	AC073930	9360	1-2176
HPDRN07	2182	951838	AC073865	9361	1-2174
HPDRN07	2182	951838	AC073930	9362	1-449
HPDRN07	2182	951838	AC073865	9363	1-849
HPDRN07	2182	951838	AC073930	9364	1-849
HPDRN07	2182	951838	AC073865	9365	1-449
HPDRG01	2183	914416	AL356152	9366	1-773
HPDRG01	2183	914416	AL158082	9367	1-773
HPDRG01	2183	914416	AL158082	9368	1-153
HPDRG01	2183	914416	AL356152	9369	1-602
HPDPS12	2184	969342	AC073487	9370	1-375 893-4326 4474-5168 5186-6317 6538-6708 6755-7192 7587-9453
HPDPS12	2184	969342	AC023055	9371	1-246

					485-1179 1198-2329 2550-2720 2767-3204 3603-5469
HPDPS12	2184	969342	AC073487	9372	1-646
HPDPS12	2184	969342	AC023055	9373	1-428
HPDPS12	2184	969342	AC023055	9374	1-245
HPDPP12	2185	969341	AP001097	9375	1-481
HPDPP12	2185	969341	AC021474	9376	1-579
HPDPP12	2185	969341	AP000931	9377	1-579
HPDPP12	2185	969341	AP001097	9378	1-125
HPDPP12	2185	969341	AC021474	9379	1-125
HPDPP12	2185	969341	AP000931	9380	1-453
HPDPP12	2185	969341	AC021474	9381	1-451
HPDOW10	2187	961782	AC026088	9382	1-494
HPDOF11	2189	965491	AL390721	9383	1-912
HPDOF11	2189	965491	AL021997	9384	1-233 901-1252 1400-1967 2803-2939 3883-4324 4569-5633 7594-8505 8713-11051
HPDOF11	2189	965491	AL390721	9385	1-2339
HPCTK02	2190	917480	AL158074	9386	1-42 468-1132 1279-1726
HPCTK02	2190	917480	AC013579	9387	1-42 468-1129 1276-1721
HPCTK02	2190	917480	AL158074	9388	1-117
HPCTK02	2190	917480	AC013579	9389	1-740 1026-1325 1835-2355
HPCTC04	2192	925777	AC006198	9390	1-972
HPCTC04	2192	925777	AL079338	9391	1-972
HPCTC04	2192	925777	AC006198	9392	1-597
HPCTC04	2192	925777	AL079338	9393	1-572
HPCTC04	2192	925777	AC006198	9394	1-187
HPCTC04	2192	925777	AL079338	9395	1-187
HPCOV68	2195	911075	AC026794	9396	1-1027
HPCOV68	2195	911075	AC004500	9397	1-1004
HPCOV68	2195	911075	AC026794	9398	1-102
HPCOV68	2195	911075	AC004500	9399	1-102

HPCAO89	2196	946913	AP001583	9400	1-56 1227-1357 3023-3526 4699-4820 8676-8831 9495-9648 11657-12553
HPCAO89	2196	946913	AP001583	9401	1-124
HPCAF65	2199	573368	AL139816	9402	1-305 1879-2426 2774-3145
HPCAB54	2201	728857	AC074194	9403	1-424
HPCAB54	2201	728857	AC074194	9404	1-580
HOVEV01	2203	914553	AL359092	9405	1-116
HOVEV01	2203	914553	AC009453	9406	1-143
HOVEV01	2203	914553	AC025036	9407	1-148
HOVEV01	2203	914553	AC016327	9408	1-125
HOVEV01	2203	914553	AC022231	9409	1-151
HOVEV01	2203	914553	AC022232	9410	1-152
HOVEV01	2203	914553	AC048342	9411	1-130
HOVEV01	2203	914553	AC048342	9412	1-118
HOVEU06	2205	933737	AL356240	9413	1-406
HOVEU06	2205	933737	AC021202	9414	1-406
HOVEO04	2206	926209	AC009763	9415	1-37 612-789 1387-1596 2329-2749
HOVEO04	2206	926209	AC008751	9416	1-37 610-787 1383-1592 2325-2745
HOVEO04	2206	926209	AC009763	9417	1-577
HOVEO04	2206	926209	AC008751	9418	1-575
HOVDD10	2209	961887	AC013555	9419	1-589
HOVDD10	2209	961887	AC013555	9420	1-3604
HOVCO50	2211	932544	AC011743	9421	1-310 1101-3106 3478-4052 4404-7119 7315-7492 7591-7677 7702-8144 8377-8410 8495-9117 9222-9386 9534-10411 10577-10783

					10903-11076
HOVCO50	2211	932544	AC009948	9422	1-195 436-930 2047-2366 3235-3687 4129-4425 5291-7148 7368-7956 8617-9180 9370-9679 10470-12475 12847-13421 13773-15659 15770-16487 16683-16860 17070-17512 17745-17778 17863-18485 18590-18754 18902-19779 19945-20150 20271-20444
HOVCO50	2211	932544	AC011743	9423	1-521
HOVCO50	2211	932544	AC011743	9424	1-564
HOVCO50	2211	932544	AC009948	9425	1-521
HOVCO50	2211	932544	AC009948	9426	1-588
HOVCM77	2213	772208	AC013452	9427	1-31 1058-1160 3236-3744 4308-4731 4830-5384 5754-5981
HOVCM77	2213	772208	AC036102	9428	1-31 1059-1161 3237-3745 4309-4732 4831-5385 5755-5982
HOVCM77	2213	772208	AC069073	9429	1-808
HOVCM77	2213	772208	AC069073	9430	1-192
HOVCM03	2214	924196	AC008026	9431	1-691
HOVCM03	2214	924196	AC018636	9432	1-1712 1781-2220 2775-3125 4267-4398 4943-5119 5395-6479

					6593-6736 8582-8759 9851-10352 10560-11273 11554-11699 13092-13782 13894-14174 14184-16225
HOVCM03	2214	924196	AC023982	9433	1-614
HOVCM03	2214	924196	AC018636	9434	1-687
HOVCM03	2214	924196	AC018636	9435	1-382
HOVCM03	2214	924196	AC023982	9436	1-439
HOVCI89	2215	786917	Z99289	9437	1-165 2231-2370 3629-5021 5116-6302
HOVCI89	2215	786917	Z99289	9438	1-282
HOVCI89	2215	786917	Z99289	9439	1-110
HOVBK69	2220	757594	AC048347	9440	1-537
HOVBK69	2220	757594	AC009319	9441	1-536
HOVBK69	2220	757594	AC048347	9442	1-299
HOVBK69	2220	757594	AC048347	9443	1-147
HOVBK69	2220	757594	AC009319	9444	1-303
HOVBK69	2220	757594	AC009319	9445	1-193
HOVBK38	2221	956238	AC006251	9446	1-442 1222-2085 2175-2409 3314-3530 5391-5542 5894-6556 7350-7446 8455-8563 9344-9752 10389-10933 14295-14691 14714-14982 17146-17504 21039-21150 21264-21477 21774-21936
HOVBK38	2221	956238	AC006251	9447	1-323
HOVBK38	2221	956238	AC006251	9448	1-289 371-500 1108-1518 2170-2282 3050-3088 4088-4145

					4455-4519 4790-5047 5422-5806 5933-6678 6727-7444
HOVBI67	2223	751665	AC004975	9449	1-1090 1399-1517 2019-2457 4390-4835 5859-6444 8606-8937 8979-9108 10450-10806 10853-12075 12331-13044 13247-13372 13940-14357 17262-17662 19647-21441
HOVAZ65	2226	750273	AP000627	9450	1-1082
HOVAZ65	2226	750273	AP000730	9451	1-1836 1991-2508
HOVAZ65	2226	750273	AP000870	9452	1-1836 1991-2508
HOVAY42	2229	713812	AC023046	9453	1-364
HOVAY42	2229	713812	AC023046	9454	1-105
HOVAY42	2229	713812	AC023046	9455	1-210
HOVAY03	2230	921959	AP002789	9456	1-308
HOVAY03	2230	921959	AP002789	9457	1-247
HOVAO25	2232	678163	AC026149	9458	1-374
HOVAO25	2232	678163	AC026149	9459	1-352
HOVAO25	2232	678163	AC026149	9460	1-518
HOVAC77	2238	578783	AC023158	9461	1-396
HOVAB61	2242	578791	AL096827	9462	1-667
HOVAB61	2242	578791	AL096827	9463	1-139
HOVAB61	2242	578791	AL096827	9464	1-1322
HOOKF10	2243	961499	AC023183	9465	1-493
HOOKF10	2243	961499	AC026678	9466	1-493
HOOKF10	2243	961499	AC026365	9467	1-493
HOOKF10	2243	961499	AC026678	9468	1-480
HOOKF10	2243	961499	AC023183	9469	1-480
HOOKF10	2243	961499	AC026365	9470	1-480
HOOJU04	2245	925774	AC048331	9471	1-59 317-593
HOOJU04	2245	925774	AC024530	9472	1-59 317-593
HOOJU04	2245	925774	AC061705	9473	1-59

					317-593
HOOJU04	2245	925774	AC048331	9474	1-572
HOOJU04	2245	925774	AC024530	9475	1-91 184-640 785-2468 2676-2898
HOOJU04	2245	925774	AC061705	9476	1-91 184-640 785-2468 2676-2898
HOOJU04	2245	925774	AC024530	9477	1-453
HOOJU04	2245	925774	AC061705	9478	1-572
HOOJN04	2246	925783	AL035684	9479	1-55 2293-2465 3852-3951 5485-5583 6544-6662 7772-7947 8614-9071 10099-10166 10618-10710 10715-11030 12681-12959 13821-13979 16726-17090 17491-18237 19028-19138 20072-20129 22633-22838 26307-31140
HOOJN04	2246	925783	AL035684	9480	1-573
HOOJN04	2246	925783	AL035684	9481	1-498
HOOJH05	2248	928627	AC021154	9482	1-935
HOOJH05	2248	928627	AC011452	9483	1-934
HOOJH05	2248	928627	AC011452	9484	1-101
HOOIG03	2251	922510	AC016883	9485	1-429
HOOIG03	2251	922510	AC073155	9486	1-429
HOOIG03	2251	922510	AC018714	9487	1-429
HOOHP02	2252	917424	AC013669	9488	1-487
HOOHP02	2252	917424	AC013669	9489	1-181 291-782 2171-2360 2703-3570 4336-4689 5249-5785 5817-6442 6834-7458



HOOAB23	2255	522227	AC051654	9490	1-129 832-1405
HOOAB23	2255	522227	AC068345	9491	1-855 1558-2131
HOOAB23	2255	522227	AC068345	9492	1-203
HONAK10	2257	968610	AC023105	9493	1-3282 3292-5377
HONAK10	2257	968610	AC023105	9494	1-1914 1958-2384
HONAH06	2258	936029	AC022286	9495	1-1132
HONAH06	2258	936029	AC005355	9496	1-33
HONAH06	2258	936029	AC002369	9497	1-1333 1663-1760 2438-2530 4503-5088
HONAH06	2258	936029	AC005730	9498	1-1130
HONAH06	2258	936029	AC002369	9499	1-228
HONAH06	2258	936029	AC005730	9500	1-887
HONAH06	2258	936029	AC005730	9501	1-192
HONAE50	2259	723571	AC073160	9502	1-749
HONAE50	2259	723571	AC027507	9503	1-749
HONAE50	2259	723571	AC027507	9504	1-158
HONAE50	2259	723571	AC073160	9505	1-158
HONAD65	2260	747152	AL138904	9506	1-474 705-1039 1625-1999
HONAD65	2260	747152	AL354990	9507	1-474 705-1039 1625-1999
HONAD65	2260	747152	AL138904	9508	1-511
HONAD65	2260	747152	AL354990	9509	1-511
HONAD65	2260	747152	AL138904	9510	1-210
HONAD65	2260	747152	AL354990	9511	1-210
HOGCW89	2264	973227	AC015988	9512	1-736
HOGCW89	2264	973227	AP001491	9513	1-736
HOGCW89	2264	973227	AC015988	9514	1-222
HOGCW89	2264	973227	AC015988	9515	1-831
HOGCW89	2264	973227	AP001491	9516	1-831
HOGCW89	2264	973227	AP001491	9517	1-229
HOGCT13	2265	657284	AC012431	9518	1-234 240-488 879-1648 1672-1969 2213-3083
HOGCT13	2265	657284	AC024483	9519	1-249 640-1409

					1433-1730 1974-2844
HOGCT13	2265	657284	AC010300	9520	1-412 810-1279 1502-1630 2316-2382 3130-4416 4989-5077 5090-5599 5990-6759 6783-7080 7321-8191
HOGCT13	2265	657284	AC010300	9521	1-399
HOGCH05	2269	930813	AL354797	9522	1-663
HOGCH05	2269	930813	AL359692	9523	1-663
HOGCH05	2269	930813	AC013740	9524	1-663
HOGCH05	2269	930813	AL359692	9525	1-431
HOGCH05	2269	930813	AL354797	9526	1-117
HOGCH05	2269	930813	AL359692	9527	1-117
HOGCH05	2269	930813	AC013740	9528	1-117
HOGCH05	2269	930813	AC013740	9529	1-431
HOGCC63	2272	745130	AC021885	9530	1-443
HOGCC63	2272	745130	AC021885	9531	1-43 176-469 2722-3017 3881-4005
HOGBE27	2275	682232	AC021573	9532	1-2701 2726-2818 2920-3387
HOGBE27	2275	682232	AC021573	9533	1-602
HOGAM56	2276	908904	AC021344	9534	1-717
HOGAI73	2277	764490	AC007215	9535	1-2096
HOGAI73	2277	764490	AC007688	9536	1-271 276-3205
HOGAI73	2277	764490	AC007215	9537	1-168
HOGAI73	2277	764490	AC007688	9538	1-776
HOGAD77	2281	772319	AC073650	9539	1-936
HOGAD77	2281	772319	AC009417	9540	1-556
HOGAD77	2281	772319	AC073650	9541	1-572
HOGAD77	2281	772319	AC009417	9542	1-572
HODKG07	2322	951875	AC072035	9543	1-786
HODKG07	2322	951875	AC072035	9544	1-389
HODGL88	2327	859300	AC020988	9545	1-886 900-3110
HODGL88	2327	859300	AC020988	9546	1-318
HODGL88	2327	859300	AC020988	9547	1-320

HODFY10	2329	963350	AC015464	9548	1-718
HODFY10	2329	963350	AL133284	9549	1-718
HODFY10	2329	963350	AC015464	9550	1-779
HODFY10	2329	963350	AC015464	9551	1-940
HODFY10	2329	963350	AL133284	9552	1-3485 8125-8521 14884-15094 17015-17375 18078-21722 21824-22143 23417-24165
HODFY10	2329	963350	AL133284	9553	1-782
HODFX19	2330	842138	AC011462	9554	1-745 1096-1314 2617-2717 3158-3842 5564-5805 6037-6404 6761-6817 6951-7090 7229-7499
HODFX19	2330	842138	AC011462	9555	1-133
HODFX04	2332	926278	AP001469	9556	1-421 1062-1420 1705-1867 1978-2089 2804-2943 3323-3420 4630-4970 5685-8599 9683-11324 11404-12154 13101-13635 13740-14218 15283-15751 15842-16654 17611-17746 18380-19010 19268-19404 19634-19850 21352-21872 23386-23623 23640-24466 25541-25784 26154-26288 27551-27876 28169-28210

					28657-28687 28993-29095 30196-30400 30800-31304
HODFX04	2332	926278	AP001469	9557	1-465
HODFX04	2332	926278	AP001469	9558	1-470
HODFW40	2334	859320	AC008927	9559	1-555
HODFW40	2334	859320	AC008589	9560	1-555
HODFW40	2334	859320	AC008779	9561	1-555
HODFW40	2334	859320	AC008927	9562	1-303
HODFW40	2334	859320	AC008589	9563	1-303
HODFW40	2334	859320	AC008779	9564	1-303
HODFR85	2335	783789	AL356136	9565	1-539
HODFR85	2335	783789	AC025014	9566	1-1196
HODFR85	2335	783789	AP001896	9567	1-1199
HODFR85	2335	783789	AL356136	9568	1-428
HODFR85	2335	783789	AC025014	9569	1-494
HODFR85	2335	783789	AP001896	9570	1-494
HODFL37	2336	948703	AC018620	9571	1-489
HODFL37	2336	948703	AC018620	9572	1-518
HODFJ11	2337	966065	AC015896	9573	1-671 1241-1647
HODFJ11	2337	966065	AC015896	9574	1-935
HODFI66	2338	974317	AC067831	9575	1-527
HODFI66	2338	974317	AC063944	9576	1-527
HODFH45	2339	974916	AL121595	9577	1-598
HODFH45	2339	974916	AL121595	9578	1-232
HODFG82	2340	779191	AC074124	9579	1-553
HODFG82	2340	779191	AC074124	9580	1-122
HODFD73	2343	909812	AL050332	9581	1-187 311-458 667-1020 2447-2586
HODFD73	2343	909812	AL161903	9582	1-187 311-458 667-1020 2448-2587
HODFD73	2343	909812	AL050332	9583	1-89
HODFC79	2344	774156	AL354665	9584	1-1880
HODFC79	2344	774156	AL356112	9585	1-1880
HODFC79	2344	774156	AL354665	9586	1-504
HODFC79	2344	774156	AL356112	9587	1-504
HODFC79	2344	774156	AL354665	9588	1-336
HODEU01	2346	915167	AC073577	9589	1-1184
HODEU01	2346	915167	AC073577	9590	1-100
HODET07	2347	952194	AF129408	9591	1-432

HODET07	2347	952194	AF129408	9592	1-663
HODES10	2348	963474	AC004928	9593	1-624
HODES10	2348	963474	AC004928	9594	1-205
HODEK82	2350	779245	AC016457	9595	1-782
HODEK82	2350	779245	AC060231	9596	1-782
HODEK82	2350	779245	AC022538	9597	1-782
HODEK82	2350	779245	AC016457	9598	1-453
HODEK82	2350	779245	AC060231	9599	1-453
HODEK82	2350	779245	AC022538	9600	1-453
HODEA14	2351	859375	AC004821	9601	1-100 2352-2466 2802-2941 2960-3163 4980-5083 6842-6968 8774-9008 10405-10540 11412-11517 11577-11682 13279-13409
HODEA14	2351	859375	AC004821	9602	1-274
HODDS89	2353	531075	AL359453	9603	1-489
HODDS89	2353	531075	AL359096	9604	1-489
HODDS89	2353	531075	AC053522	9605	1-489
HODDS89	2353	531075	AC015973	9606	1-489
HODDS89	2353	531075	AL359453	9607	1-331
HODDS89	2353	531075	AL359096	9608	1-331
HODDS89	2353	531075	AC053522	9609	1-331
HODDS89	2353	531075	AC015973	9610	1-331
HODDS74	2354	765863	AC016957	9611	1-429 571-934 1473-2003 2118-2519 3522-3589
HODCZ39	2358	875811	AC008990	9612	1-579 1410-1855 2046-4238 4245-4589 4723-5500 5796-6198
HODCZ39	2358	875811	AC010620	9613	1-834 1126-1489 1779-2082 2087-2615 2924-3005 3288-3484 6156-6584

					6654-6857 7053-7451 9732-10222 10604-12196 28404-28529 29430-29840 30786-31233 39537-40066 40600-41177 42007-42545 42643-44839 44846-45190 45324-46101 46397-46799
HODCZ39	2358	875811	AC008990	9614	1-95 1041-1794
HODCZ39	2358	875811	AC008990	9615	1-530
HODCZ39	2358	875811	AC010620	9616	1-95 1040-1793
HODCY73	2359	764543	AC025992	9617	1-521
HODCY73	2359	764543	AL356957	9618	1-690
HODCY73	2359	764543	AL358813	9619	1-450
HODCY73	2359	764543	AL162612	9620	1-1431 1501-1692 1855-3146 3686-4006 4703-6498
HODCY73	2359	764543	AC018593	9621	1-1430 1500-1691 1854-3144 3684-3985 4696-6493
HODCY73	2359	764543	AL358813	9622	1-756
HODCY73	2359	764543	AC025992	9623	1-1496
HODCY73	2359	764543	AL356957	9624	1-1494
HODCY73	2359	764543	AL162612	9625	1-384
HODCY73	2359	764543	AL358813	9626	1-1002
HODCY73	2359	764543	AL162612	9627	1-850
HODCY73	2359	764543	AC018593	9628	1-332
HODCY73	2359	764543	AC018593	9629	1-1496
HODCY32	2360	859543	AC023867	9630	1-611
HODCY32	2360	859543	AC023867	9631	1-648
HODCY32	2360	859543	AC009495	9632	1-1907 2428-2566 3458-4205 5930-6606 6608-6806

					7787-8721 9635-9787 12114-12354 12826-12943 14443-14643 14777-15780 16627-16758 16802-17297 21703-21946 22365-24099
HODCY32	2360	859543	AC009495	9633	1-476
HODCW83	2361	781287	AL035367	9634	1-78 174-305 1281-1442 1519-1552 2373-2498 2594-2818 2976-3043 4113-4271 4346-4441 4979-5277 5571-5718 5960-6104 7479-7833 8245-8371 8551-8718 8949-9503 9663-9777 10007-10128 10242-10323 10596-10905 11404-12232
HODCW83	2361	781287	AC020567	9635	1-1875 1958-2262 2388-2630 2707-2875
HODCW83	2361	781287	AC020567	9636	1-99
HODCO15	2363	660502	AC018379	9637	1-52 865-1157 1271-1363 1369-1933 3640-3798 4011-4819 5198-6057 6253-8477
HODCJ84	2364	973286	AC013429	9638	1-687
HODCJ84	2364	973286	AC008265	9639	1-687

HODCJ84	2364	973286	AC013429	9640	1-410
HODCJ84	2364	973286	AC013429	9641	1-544
HODCJ84	2364	973286	AC008265	9642	1-544
HODCJ84	2364	973286	AC008265	9643	1-410
HODCC05	2365	932633	AC006946	9644	1-57 724-1966 4206-4370
HODBZ85	2367	784526	AC024994	9645	1-384 468-807 1074-1320
HODBZ85	2367	784526	AL133340	9646	1-384 468-807 1074-1320
HODBZ85	2367	784526	AC024994	9647	1-392 1812-2867
HODBZ85	2367	784526	AL133340	9648	1-392 1812-2867
HODBU72	2369	766284	AC072044	9649	1-379
HODBU72	2369	766284	AC026876	9650	1-379
HODBU72	2369	766284	AC009893	9651	1-379
HODBF33	2373	702750	AC073640	9652	1-317 530-1570 1730-2268 5937-6065
HODBF17	2374	529389	AL157875	9653	1-571
HODBF17	2374	529389	AL157875	9654	1-1818
HODBD93	2375	792579	AC027105	9655	1-567
HODBD93	2375	792579	AL122023	9656	1-567
HODBD93	2375	792579	AL132838	9657	1-567
HODBC42	2377	529635	AP002020	9658	1-29 634-2028
HODBC42	2377	529635	AC004067	9659	1-29 634-2028
HODBC42	2377	529635	AP002020	9660	1-141
HODBC42	2377	529635	AP002020	9661	1-386
HODBC42	2377	529635	AC004067	9662	1-386
HODBA48	2378	721931	AC005046	9663	1-157 1370-1522 1727-1861 2415-2630 3229-3373 3584-3817 6852-7006 7432-7608 9282-9534 10097-10628 10841-11055



					11740-11963 13041-13323 13451-13850 14382-15096 16075-16749 18154-18346 18531-18857 19624-20680 20738-21207 22021-22555 22673-23076 25746-25974 26932-27715 27740-30183 30458-30899 31160-32000 32177-32662 33181-33425 33436-33652 33857-34003 34289-34464 34518-34738 36446-37141 37163-38834 38961-39339
HODBA48	2378	721931	AC005046	9664	1-136
HODAV84	2381	592179	AL133514	9665	1-629
HODAV84	2381	592179	AL133514	9666	1-630
HODAK05	2384	932639	AC026405	9667	1-1145 1846-2312 3041-3568 4230-6044 6403-6576 9005-9592 10059-10472 10734-13322
HODAK05	2384	932639	AC026405	9668	1-526
HODAE72	2385	529638	AC021661	9669	1-196
HODAE72	2385	529638	AL356583	9670	1-196
HODAA92	2389	790588	AC026636	9671	1-234
HODAA80	2391	529560	AL354993	9672	1-882
HODAA80	2391	529560	AL354993	9673	1-101
HODAA80	2391	529560	AL354993	9674	1-111
HODAA69	2392	529563	AP000791	9675	1-772
HODAA69	2392	529563	AP002349	9676	1-768
HODAA69	2392	529563	AC007030	9677	1-773
HODAA54	2393	859582	AC026731	9678	1-256

HODAA21	2395	859583	AL035530	9679	1-303 736-986 10977-11340 13616-13896 15003-15115 15827-16799 17915-18493 21381-21837 22627-22812 22838-23836 24249-24953 25245-25435 27484-27678 28829-29505 30105-30641 32209-32582 32642-33135 33357-33685 34531-34948 38450-38642 39237-39536 40191-40354 42778-42866 43278-43368 43400-44302 44382-44960 45622-46160 46194-46311
HODAA21	2395	859583	AL035530	9680	1-592
HODAA21	2395	859583	AL035530	9681	1-1767
HODAA15	2396	523382	AL022068	9682	1-127
HODAA04	2398	927711	AL138713	9683	1-497
HODAA04	2398	927711	AL138713	9684	1-480
HOCPU05	2399	928651	AL022721	9685	1-1263 6140-6293 8003-8156 9128-9256 9263-10128 11307-11562 13464-13807 14210-14510 15844-17115 17822-19417 20123-20680 21428-21754 25071-25264 25391-25481

					25570-25604 30944-31465 34638-34933 35608-35955 36105-36346 38876-39207 44154-44338 44424-44513 44661-45127 45137-45929
HOCPU05	2399	928651	AL022721	9686	1-117
HOCPH02	2400	917453	AL359674	9687	1-684
HOCPH02	2400	917453	AL359674	9688	1-456
HOCPF02	2401	917630	AL359372	9689	1-1054 2139-2246 4030-4427 6093-6259
HOCPF02	2401	917630	AL050343	9690	1-1054 2139-2246 4030-4428 6094-6260
HOCPF02	2401	917630	AL359372	9691	1-31 42-315
HOCPF02	2401	917630	AL050343	9692	1-274
HOCPF02	2401	917630	AL050343	9693	1-742
HOCOV07	2402	951744	AC026974	9694	1-813
HOCOV07	2402	951744	AL079341	9695	1-813
HOCOV07	2402	951744	AC026974	9696	1-306
HOCOV07	2402	951744	AL079341	9697	1-306
HOCMM01	2403	914464	AC078864	9698	1-954
HOCMM01	2403	914464	AC019244	9699	1-829
HOCMI24	2404	878363	AC023046	9700	1-1593
HOCMI24	2404	878363	AC023046	9701	1-353
HNOAD04	2407	926258	AC069278	9702	1-741
HNOAD04	2407	926258	AC069278	9703	1-698 1008-1383
HNOAD04	2407	926258	AC069278	9704	1-2222
HNNNB08	2408	957719	AC005281	9705	1-276 835-5981 5998-8928
HNNNB08	2408	957719	AC005281	9706	1-529
HNNNA07	2409	899742	AC037444	9707	1-625
HNNNA07	2409	899742	AC013698	9708	1-625
HNNNA07	2409	899742	AC037444	9709	1-285
HNNNA07	2409	899742	AC037444	9710	1-316
HNNNA07	2409	899742	AC013698	9711	1-285
HNNNA07	2409	899742	AC013698	9712	1-316

HNIAB92	2410	683077	AC078916	9713	1-364
HNIAB92	2410	683077	AC022305	9714	1-686
HNIAB92	2410	683077	AC072032	9715	1-364
HNIAB92	2410	683077	AC078916	9716	1-288
HNIAB92	2410	683077	AC072032	9717	1-288
HNBVH02	2413	917719	AL355822	9718	1-103 170-600 780-1088 1296-1647 2086-2390 3428-3714 3745-4698 5342-10951
HNBVH02	2413	917719	AL117354	9719	1-103 170-600 780-1088 1296-1647 2085-2407 3742-4775 4783-4893 5339-10949
HNBVH02	2413	917719	AL355822	9720	1-389
HNBVH02	2413	917719	AL117354	9721	1-389
HNBVC03	2414	922402	AC017099	9722	1-396 510-858 1026-1198 2607-2761
HNBVC03	2414	922402	AC017099	9723	1-196
HNBUQ06	2415	933673	AC022558	9724	1-133 1253-1381 2940-3076 3160-3199 3860-3985 4129-4569 5374-5488 5932-7588
HNBUQ06	2415	933673	AC022558	9725	1-373
HNBUQ06	2415	933673	AC022558	9726	1-374
HNBUI10	2417	961734	AC010990	9727	1-227 339-1923 1947-2413 2498-2672
HLWFJ69	2418	754476	AC012169	9728	1-414
HLWFJ69	2418	754476	AC012169	9729	1-200 540-702 2463-2655 4388-4755

					5077-5416 5954-6143
HLWEH10	2420	963548	AC016151	9730	1-593
HLWEH10	2420	963548	AC016147	9731	1-593
HLWEH10	2420	963548	AC011881	9732	1-1143
HLWEH10	2420	963548	AC024454	9733	1-1146
HLWEH10	2420	963548	AC000382	9734	1-1134
HLWEH10	2420	963548	AC016147	9735	1-406
HLWEH10	2420	963548	AC016147	9736	1-223
HLWEH10	2420	963548	AC011881	9737	1-224
HLWEH10	2420	963548	AC024454	9738	1-224
HLWEH10	2420	963548	AC000382	9739	1-223
HLWEH10	2420	963548	AC000382	9740	1-1424
HLWEA90	2421	787632	AC010582	9741	1-87 201-1019
HLWEA90	2421	787632	AL136040	9742	1-87 201-1019
HLWEA90	2421	787632	AC010582	9743	1-570
HLWEA90	2421	787632	AC010582	9744	1-172
HLWEA90	2421	787632	AL136040	9745	1-172
HLWEA90	2421	787632	AL136040	9746	1-558
HLWDD01	2423	915378	AL109757	9747	1-558
HLWDD01	2423	915378	AL031296	9748	1-670 1590-2584 3609-3751 4204-4803 4847-5271 9874-10146 11847-12328 12493-13051 13395-13635 15455-15917 17288-17739 18945-19908 21414-22006 27737-27823 35955-36575 36643-37204 37341-37504 39154-39312 41736-42263 47221-47669 47712-48167 50898-51095 51163-51655 51716-52580 52706-58181

HLWDD01	2423	915378	AL109757	9749	1-482
HLWDD01	2423	915378	AL031296	9750	1-274
HLWCN93	2426	791854	AL356915	9751	1-688
HLWCN93	2426	791854	AL356915	9752	1-339
HLWCN93	2426	791854	AL356915	9753	1-253
HLWCF33	2429	687995	AC018868	9754	1-99 586-1341 2056-2449 2920-3360 3386-3488 4490-5122 5574-5649 7802-7900 9752-9814 10688-11014 11951-12045
HLWCF33	2429	687995	AC018868	9755	1-554
HLWCE47	2430	720156	AC023331	9756	1-121 258-3102 4363-4509
HLWCE47	2430	720156	AC023331	9757	1-45 471-1400 1581-2065 2682-3136 4339-5870
HLWBW29	2433	690515	AL121586	9758	1-397 2315-2406 3620-4013 4016-4099 4277-4545 4635-4916 5001-5099 5203-5521
HLWBW29	2433	690515	AL139226	9759	1-397 2314-2405 3619-4012 4015-4098 4276-4544 4634-4846
HLWBW29	2433	690515	AL121586	9760	1-218 386-445 524-1437 1507-1603 1800-2130 2481-2687 3285-3720 4079-4447

					4632-5281 5733-6062 6435-7005 7989-8263 8407-8736 8786-8848 8963-9148 10148-10245 10438-11523 11689-12039 12381-12673 13749-14001 14716-14838 15055-15209 15263-15441 15473-15610
HLWBW29	2433	690515	AL139226	9761	1-86 190-508
HLWBT09	2434	887877	AP000655	9762	1-447
HLWBT09	2434	887877	AC012153	9763	1-447 3188-3293 6053-6211 6320-6805 6922-7663 7858-7976 8361-8482 9276-9370
HLWBT09	2434	887877	AC012153	9764	1-267
HLWBS62	2435	743406	AC005203	9765	1-216 492-953 1282-1431 1754-1846 2011-2094 2599-2717 2956-3306 3685-4243 4636-4916 4919-5475 5711-8099 8218-9037 9387-10436 10500-11440 11934-12921 13353-13560 13759-13866 14223-14326 14799-15187

					15528-15837 16093-16197 16539-16716 17686-17775 18652-18786 20304-20465 21288-21364 21996-22111 23463-23703 23726-24579 24595-24722 25683-25758
HLWBS62	2435	743406	AC006111	9766	1-216 492-953 1282-1431 1754-1846 2011-2094 2543-2661 2900-3250 3629-4187 4580-4860 4863-5419 5655-6300 6361-8043 8162-8981 9331-10380 10444-11384 11878-12865 13297-13504 13702-13809 14166-14269 14742-15130 15602-15772 16482-16659 17629-17718 18595-18729 20247-20408 21231-21307 21939-22054 23406-23646 23669-24522 25626-25701
HLWBS62	2435	743406	AC005203	9767	1-663
HLWBS62	2435	743406	AC006111	9768	1-663
HLWBR85	2436	784261	AC073573	9769	1-157 190-1625
HLWBR85	2436	784261	AC073573	9770	1-129



					443-1256
HLWBR85	2436	784261	AC073573	9771	1-1487
HLWBJ65	2438	747784	AL049611	9772	1-165 335-911 1853-2122 5376-6516
HLWBH92	2439	791355	AC015461	9773	1-42 614-1073 1433-1570 2132-2699 2822-3332 3681-3973 4281-4618 5384-6480 6612-7384 8045-8651 8864-8986 9098-10018 10476-11001 11359-11552 11580-11802 12250-12674 12793-13281 14507-14719 15077-15520 16239-17705
HLWBH92	2439	791355	AL157394	9774	1-608 822-934 1055-1975 2433-2958 3316-3508 3537-3759 4207-4631 4750-5238 6464-6676 7034-7477 8196-9662
HLWBH92	2439	791355	AL157394	9775	1-773
HLWBF48	2441	721530	AC025230	9776	1-507
HLWBF48	2441	721530	AC025230	9777	1-320
HLWBE74	2442	887967	AC026529	9778	1-387
HLWBE74	2442	887967	AC026529	9779	1-116
HLWBC21	2443	869611	AC008870	9780	1-76 1811-2154 2232-2671 3021-3129 4039-4147

					4436-4506 4859-5131 6200-6622 7373-7595 7729-8234 9030-9789 10164-10575 10878-14792
HLWBC21	2443	869611	AC009043	9781	1-226 409-741 1925-2135 3871-4214 4292-4731 5079-5187 6097-6205 6494-6564 6917-7189 8258-8680 9431-9653 9787-10292 11088-11847 12223-12634 12937-16851
HLWBC21	2443	869611	AC002400	9782	1-226 409-741 1926-2136 3872-4215 4293-4732 5080-5188 6098-6206 6495-6565 6918-7190 8259-8681 9432-9654 9788-10293 11090-11849 12225-12636 12939-16853
HLWBC21	2443	869611	AC009043	9783	1-523
HLWBC21	2443	869611	AC002400	9784	1-522
HLWBA27	2445	931387	AC073342	9785	1-164 208-280 349-1975 1978-2434 2614-2946 4135-9074 9200-9507

HLWBA27	2445	931387	AC073342	9786	1-434
HLWAS09	2447	625419	AC023300	9787	1-42 621-892 5228-5295 5624-5709 6898-7039 7372-7745 8210-8940 9110-9248 11554-11620 11800-12095 12143-12209 12240-12612 13239-13378 13766-13932 15723-16186 16578-16970 17992-18068 19055-19192 19207-19562 20293-20705 20784-20888 21589-21754 22112-22267 22754-23587
HLWAS09	2447	625419	AL390962	9788	1-393
HLWAS09	2447	625419	AC023545	9789	1-332 797-1527 1697-1835 4141-4207 4387-4682 4730-4796 4827-5199 5826-5965 6353-6519 8310-8773 9165-9557 10579-10655 11642-11779 11794-12149 12880-13292 13371-13474 14175-14340 14698-14853 15340-16173
HLWAS09	2447	625419	AL390962	9790	1-464
HLWAO67	2449	751503	AC023120	9791	1-113

					1670-1968 2817-2876 3739-3958 4039-4861 8042-8236 9960-10253 10358-10487 11261-11363 12445-12554 17967-18436 19317-19470 19666-19900 20264-20363 20475-20779 25579-26082 26905-27377 27555-27983 28656-28997 29146-29769 30579-31170 31202-31625 32023-32698 34599-34740 34805-35520 35575-37925
HLWAO67	2449	751503	AC023120	9792	1-1768
HLWAO67	2449	751503	AC023120	9793	1-518
HLWAE09	2453	789030	AL162258	9794	1-1463 1779-2270 2460-2664 2763-3258 3293-4333 4480-5086
HLWAE09	2453	789030	AL162258	9795	1-245
HLWAD57	2454	734655	AL049651	9796	1-469
HLWAD33	2455	702317	AC015849	9797	1-458
HLWAD33	2455	702317	AC004675	9798	1-466
HLWAD33	2455	702317	AC004675	9799	1-250
HLWAD33	2455	702317	AC004675	9800	1-773 1224-1484 1586-2669
HLWAD32	2456	699158	AC069057	9801	1-366
HLWAD02	2457	919725	AC008005	9802	1-545
HLWAD02	2457	919725	AC019292	9803	1-545
HLWAD02	2457	919725	AC008005	9804	1-283
HLWAD02	2457	919725	AC008005	9805	1-333 2042-3121

					3134-4497 4933-5401
HLWAD02	2457	919725	AC019292	9806	1-283
HLWAD02	2457	919725	AC019292	9807	1-333 2039-3118 3131-3936
HKZAH11	2458	965175	AL359092	9808	1-116
HKZAH11	2458	965175	AC009453	9809	1-143
HKZAH11	2458	965175	AC025036	9810	1-148
HKZAH11	2458	965175	AC011953	9811	1-126
HKZAH11	2458	965175	AC022231	9812	1-151
HKZAH11	2458	965175	AP001451	9813	1-96
HKZAH11	2458	965175	AC016327	9814	1-165
HKZAH11	2458	965175	AC048342	9815	1-130
HKZAH11	2458	965175	AP000562	9816	1-724
HKZAH11	2458	965175	AC016327	9817	1-195
HKZAH11	2458	965175	AC048342	9818	1-118
HKZAH11	2458	965175	AP000562	9819	1-187
HJMBX19	2459	668568	AC011184	9820	1-433 545-883 1218-1556
HJMBX19	2459	668568	AC011184	9821	1-331
HJMBS77	2460	772101	AC009902	9822	1-320
HJMBS77	2460	772101	AC009902	9823	1-1732
HJMBS10	2461	964464	AP000116	9824	1-606
HJMBS10	2461	964464	AP000192	9825	1-606
HJMBS10	2461	964464	AP000048	9826	1-606
HJMBQ90	2462	788834	AL162271	9827	1-1136 1294-1518 2224-2510 2907-3489
HJMBQ90	2462	788834	AC068198	9828	1-808 859-1169 1306-2443 2599-2823 3529-3815 4215-4401 4557-4741
HJMBQ90	2462	788834	AL162271	9829	1-311
HJMBQ90	2462	788834	AL162271	9830	1-45 291-609
HJMBQ90	2462	788834	AC068198	9831	1-45 294-612
HJMBN02	2463	919737	AC010687	9832	1-632
HJMBN02	2463	919737	AC011399	9833	1-847 995-1104

					1510-2357 2363-2467 2608-3240 3319-4028 5266-5726 7081-7398
HJMBN02	2463	919737	AC005214	9834	1-847 995-1104 1510-2357 2363-2540 2608-3240 3319-4029 5268-5728 7082-8757 8896-9359 10246-10442 10573-10763 10952-11038 11298-11386 11406-12164 12287-13192 13285-13604 13686-14403
HJMBN02	2463	919737	AC010687	9835	1-711
HJMBN02	2463	919737	AC011399	9836	1-560 1032-1413 1565-1911
HJMBN02	2463	919737	AC010687	9837	1-847 995-1104 1510-2356 2362-2539
HJMBN02	2463	919737	AC005214	9838	1-193
HJMBN02	2463	919737	AC005214	9839	1-559 1031-1412 1564-1910
HJMBI93	2464	929114	AL031847	9840	1-1841
HJMAV93	2465	828110	AC025740	9841	1-84 504-619 2486-5330 5682-7115
HJMAV93	2465	828110	AC025740	9842	1-461
HJMAV93	2465	828110	AC025740	9843	1-772
HJMAU07	2466	961623	AC004493	9844	1-35 410-599 1161-1291 4637-5891 6021-6140

					6276-8377 8478-15183 15896-17173 17337-17391 17567-17817 18166-19658 20060-20408 21099-21245 22688-23082 23890-24387
HJMAU07	2466	961623	AC004493	9845	1-942
HJMAQ86	2467	785410	AP001805	9846	1-2130
HJMAQ86	2467	785410	AC023532	9847	1-2132 5338-5376
HJMAQ86	2467	785410	U73643	9848	1-2131 5344-5373
HJMAQ86	2467	785410	AP001805	9849	1-692
HJMAQ86	2467	785410	AC023532	9850	1-692
HJMAQ86	2467	785410	U73643	9851	1-692
HJMAJ91	2469	811222	AP000579	9852	1-148 924-1039 2043-2371 3168-3291 3324-3436 3442-3596 4583-4741 5311-5502 5615-5693 5944-6637 7166-8217
HJMAJ91	2469	811222	AP000579	9853	1-485
HJMAI62	2470	742612	AC002325	9854	1-210 828-1009 1391-1843 2126-2699 3119-3263 3622-3964 3992-4139 5066-6149
HJMAI62	2470	742612	AC001644	9855	1-158 708-871 1883-2092 2710-2891 3273-3725 4008-4581 5001-5145 5504-6021

					6948-8031
HJMAI62	2470	742612	AC002355	9856	1-116 669-833 1883-2079 2700-2882 3271-3733 4022-4177 5027-5176 5539-5908 5938-6070 7027-8066
HJMAI62	2470	742612	AC002325	9857	1-2217 2648-3015 3487-3706 4094-4549 5330-5457 5621-5743 7223-7371 10631-10827
HJMAI62	2470	742612	AC001644	9858	1-128
HJMAI62	2470	742612	AC001644	9859	1-2217 2648-3015 3487-3706 4094-4549 5330-5457 5621-5743 7223-7371 10632-10828
HJMAI62	2470	742612	AC002355	9860	1-186
HETJY68	2472	752542	AC021236	9861	1-64 107-782 957-1948
HETFF43	2477	529589	AC002430	9862	1-193
HETFF43	2477	529589	AC007384	9863	1-193
HETFF43	2477	529589	AC002430	9864	1-1417
HETFF43	2477	529589	AC002430	9865	1-772
HETFF43	2477	529589	AC007384	9866	1-1417
HETFF43	2477	529589	AC007384	9867	1-772
HETBM55	2482	929285	AC026565	9868	1-199 302-449 971-1329 1415-1771
HETBM55	2482	929285	AL391068	9869	1-199 302-449 972-1330 1416-1772
HETBM55	2482	929285	AC026565	9870	1-317



HETBM55	2482	929285	AL391068	9871	1-98
HETBM55	2482	929285	AL391068	9872	1-478 786-1282
HETAS81	2485	778539	AJ239326	9873	1-496
HETAS81	2485	778539	AJ239326	9874	1-485
HETAS62	2486	754155	AC024527	9875	1-1433
HETAS62	2486	754155	AC024527	9876	1-458 916-1327 2547-2905 3015-3726 4373-4406
HETAS62	2486	754155	AL135916	9877	1-506 579-1425
HETAS62	2486	754155	AL021368	9878	1-488 579-1425
HETAS62	2486	754155	AC024527	9879	1-461
HETAS62	2486	754155	AC024527	9880	1-84
HETAS62	2486	754155	AC024527	9881	1-536
HETAS62	2486	754155	AL135916	9882	1-459
HETAS62	2486	754155	AL135916	9883	1-395
HETAS62	2486	754155	AL021368	9884	1-395
HETAS62	2486	754155	AL021368	9885	1-459
HETAJ14	2487	660831	AL137801	9886	1-179 260-500 2213-2348 4736-5133 5208-5285 5508-5662 5773-5903 7130-8120 8349-8770 9477-10513 11808-11888
HETAJ14	2487	660831	AC011945	9887	1-28 255-408 519-649 1876-2866 3096-3518 4225-5262 6557-6637
HETAJ14	2487	660831	AL137801	9888	1-175
HETAJ14	2487	660831	AC011945	9889	1-175
HEQCC01	2488	924849	AC004477	9890	1-326 1029-1626 2309-2345 2958-3015 3982-4124

					5005-5248 5482-6071 6519-6577 7045-7136 7692-7780 8037-8184 9575-9866 10372-10789 11501-11618
HEQBG85	2492	827915	AC009471	9891	1-108 723-884 4822-6340 9727-10217 10407-10719 10931-11142 14095-14493 15086-15208 15529-15664 18304-18739 18985-19103 19756-22635
HEQBE71	2495	760305	AC012522	9892	1-1087
HEQBE71	2495	760305	AC006254	9893	1-1263 1513-2033 2070-2296 2334-2660 2830-4987 5578-6030 6277-6369 8894-9193 9213-9265 9347-9448 10205-10424 11055-11156 11776-11991
HEQBE71	2495	760305	AC012522	9894	1-1263 1513-2033 2070-2296 2334-2660 2830-3734
HEQBE71	2495	760305	AC012522	9895	1-453
HEQBE71	2495	760305	AC006254	9896	1-322
HEQAM59	2497	739220	AC010226	9897	1-575 642-1128
HEQAM59	2497	739220	AC010472	9898	1-1277 1339-1830
HEQAM59	2497	739220	AC008628	9899	1-1934

HEQAM59	2497	739220	AC026789	9900	1-1934 2001-2487
HEQAM59	2497	739220	AC022114	9901	1-576
HEQAM59	2497	739220	AC026789	9902	1-157
HEQAM59	2497	739220	AC010226	9903	1-1431
HEQAM59	2497	739220	AC010472	9904	1-243
HEQAM59	2497	739220	AC008628	9905	1-157
HEQAM59	2497	739220	AC026789	9906	1-914
HEPCB04	2502	941270	AL023581	9907	1-394 541-679
HEPBO85	2504	783362	AC010192	9908	1-1410
HEPBO85	2504	783362	AC010192	9909	1-844
HEPAX40	2506	535627	AP000872	9910	1-919
HEPAX40	2506	535627	AP001316	9911	1-918
HEPAX40	2506	535627	AC020735	9912	1-918
HEPAX40	2506	535627	AP000872	9913	1-239
HEPAX40	2506	535627	AP001316	9914	1-239
HEPAX40	2506	535627	AC020735	9915	1-239
HEPAP34	2509	703336	AC023500	9916	1-861 1078-1553 1584-2086 2457-5820 5956-6035 6220-6390 6480-6573
HEPAP34	2509	703336	AC023500	9917	1-90 204-285 394-540 757-840 1060-1090
HEPAP34	2509	703336	AC023500	9918	1-44 976-1138 1382-1480 1506-1645 2208-2505 2848-2978 3094-3276 4404-4939 5843-5881
HEPAJ14	2512	657440	AL158843	9919	1-749
HEPAJ14	2512	657440	AL158843	9920	1-548
HEPAJ04	2513	933091	AC078837	9921	1-358
HEPAJ04	2513	933091	AC015937	9922	1-295 1964-2131 2295-2696
HEPAJ04	2513	933091	AC007993	9923	1-295 1964-2131

					2295-2696
HEPAJ04	2513	933091	AC015937	9924	1-152 343-406 656-852
HEPAJ04	2513	933091	AC007993	9925	1-152 343-406 656-852
HEPAE58	2514	509130	AL356017	9926	1-422 489-1010 1016-1105 4311-4768 4930-5657 12468-12775 12982-13085 17810-19506 19953-20359 20615-20935 21563-21594 21625-21685 21806-22238
HEPAE58	2514	509130	AL117187	9927	1-422 489-1009 1015-1104 4310-4767 4929-5656 12467-12774 12981-13084 17809-19505 19952-20358 20614-20934 21562-21593 21624-21684 21805-22237
HEPAE02	2515	921389	AC004887	9928	1-573
HEGBA01	2518	915596	AC006333	9929	1-164
HEGBA01	2518	915596	AC006333	9930	1-1132
HEGBA01	2518	915596	AC006333	9931	1-106
HEGAQ91	2520	789940	AL031319	9932	1-429 1170-1866 7200-7527 8540-8925
HEGAL55	2521	731654	AL133367	9933	1-51 740-1103 3374-3642 5341-6839
HEGAL55	2521	731654	AL139300	9934	1-51 740-1103

					3374-3642 5340-6838
HEGAL55	2521	731654	AL133367	9935	1-680
HEGAL55	2521	731654	AL139300	9936	1-535
HEGAL55	2521	731654	AL139300	9937	1-680
HEGAJ08	2522	959216	AC013472	9938	1-162 207-664 1217-1396 1663-1842 2264-3540 3892-4029
HEGAC02	2523	918992	Z93016	9939	1-154 1660-2193 4376-4518 4613-4754 5136-5690
HEGAC02	2523	918992	Z93016	9940	1-196
HEEAY84	2524	782706	AC058792	9941	1-366 744-1196
HEEAY84	2524	782706	AC024408	9942	1-366 744-1196
HEEAY84	2524	782706	AL162578	9943	1-366 744-1196
HEEAY84	2524	782706	AL136091	9944	1-366 744-1196
HEEAY84	2524	782706	AC024408	9945	1-379
HEEAY84	2524	782706	AL162578	9946	1-379
HEEAY84	2524	782706	AL136091	9947	1-379
HEEAY84	2524	782706	AC058792	9948	1-379
HEEAX09	2525	912065	AL355987	9949	1-380 897-1234 1680-1754 2724-3894
HEEAX09	2525	912065	AL355987	9950	1-412
HEEAW40	2526	710655	AL132982	9951	1-475 741-1367
HEEAP59	2527	738892	AC019120	9952	1-389 915-1330
HEEAP59	2527	738892	AC019120	9953	1-520
HEEAH94	2529	794257	AC044789	9954	1-596
HEEAH94	2529	794257	AC009877	9955	1-621
HEEAH94	2529	794257	AC039056	9956	1-618
HEEAH94	2529	794257	AC009877	9957	1-185
HEEAH94	2529	794257	AC009877	9958	1-358
HEEAH94	2529	794257	AC039056	9959	1-358
HEEAH94	2529	794257	AC039056	9960	1-185
HEEAH76	2530	769950	AC010600	9961	1-835

					1917-2695
HEEAH76	2530	769950	AC010600	9962	1-427
HEEAH76	2530	769950	AC010600	9963	1-516
HEEAH57	2531	734488	AC069029	9964	1-561
					661-1152
HEEAH57	2531	734488	AC069029	9965	1-150
HEEAG51	2533	930810	U73637	9966	1-456
					624-1143
					1468-3366
					5719-5910
					11252-11421
					16310-16521
					16547-16574
					18633-20907
HEEAG51	2533	930810	AF015416	9967	1-456
					677-1130
					1469-3367
					5720-5912
					6136-6235
					11254-11423
					16312-16523
					16549-16576
					18636-19929
HEEAG51	2533	930810	AF015416	9968	1-727
HEEAG51	2533	930810	U73637	9969	1-280
HEEAG51	2533	930810	AF015416	9970	1-280
HEEAD13	2535	470886	AC020558	9971	1-162
					5477-5629
					8588-8704
					8974-9372
					9931-10402
					11053-11250
					11813-11910
					12288-12575
HEEAD13	2535	470886	AC073621	9972	1-153
					3113-3228
					3498-3896
					4455-4926
					5578-5775
					6338-6435
					6813-7100
					10158-10763
					11954-11987
HEEAD13	2535	470886	AC073621	9973	1-428
HEAAX26	2537	684734	AL159994	9974	1-2470
HEAAX26	2537	684734	AL159994	9975	1-313
HEAAR47	2539	973284	AC004672	9976	1-735

HEAAR21	2540	883939	AC005146	9977	1-979
HEAAR21	2540	883939	AC005146	9978	1-331
HEAAR21	2540	883939	AC005146	9979	1-396
HEAAN43	2541	842032	AC008435	9980	1-342 1365-2096
HEAAG42	2545	714041	AC015531	9981	1-1301
HEAAG42	2545	714041	AC015531	9982	1-569
HEAAG42	2545	714041	AC015531	9983	1-102
HEAAB66	2546	844361	AC002404	9984	1-732 3584-3740
HEAAB66	2546	844361	AC002404	9985	1-175
HEAAB66	2546	844361	AC002404	9986	1-343
HCOPI07	2549	951645	AC015589	9987	1-501
HCOPI07	2549	951645	AC010328	9988	1-501
HCOPI07	2549	951645	AC015589	9989	1-452
HCOPI07	2549	951645	AC015589	9990	1-309
HCOPI07	2549	951645	AC010328	9991	1-309
HCOPI07	2549	951645	AC010328	9992	1-452
HCOPF07	2550	951655	AL139142	9993	1-687 714-1246
HCOPF07	2550	951655	AC021635	9994	1-687 714-1246
HCOOF07	2551	951693	AC000016	9995	1-2256
HCOOF07	2551	951693	AC025090	9996	1-61 388-1387 4757-5078 5239-5403 5784-6271 6305-9404
HCOOF07	2551	951693	AC000016	9997	1-2086
HCOOF07	2551	951693	AC025090	9998	1-426
HCOOF07	2551	951693	AC000016	9999	1-797
HCOOF07	2551	951693	AC025090	10000	1-2087
HCONP02	2552	917577	AC022441	10001	1-1525 1644-2207
HCONP02	2552	917577	AC008811	10002	1-1268 1387-1950
HCONP02	2552	917577	AC008831	10003	1-72 1850-1898 1960-2591 3025-3362 3408-3487 3859-4611 4949-5354 5927-6259 7760-8619 9073-9122

					10060-10638 10766-11381 12595-12900 14574-15215 17051-17438 18105-18470 18786-19243 19413-20937 21056-21619
HCONP02	2552	917577	AC022441	10004	1-458
HCONP02	2552	917577	AC008811	10005	1-458
HCONP02	2552	917577	AC008831	10006	1-140
HCONM33	2553	971637	AF196969	10007	1-1043 1119-1879
HCONM33	2553	971637	AF196969	10008	1-483
HCONM33	2553	971637	AF196969	10009	1-266
HCHNW48	2557	862478	AL157369	10010	1-46 279-590 2838-3019 5420-5719 6799-7566
HCHNW48	2557	862478	AL157369	10011	1-441
HCHNW48	2557	862478	AL157369	10012	1-570
HCHMJ89	2560	786765	AL353760	10013	1-405 2788-2851
HCHMJ89	2560	786765	AL139410	10014	1-405 2788-2851
HCHMJ89	2560	786765	AL353760	10015	1-130 1147-1704 2371-2416 2507-3019 3056-3180 3335-3656 3695-3784
HCHMJ89	2560	786765	AL139410	10016	1-440 470-1166 1737-5349 5455-6170 6814-6950 7356-8416 10213-10336 10460-10627 10656-11870
HCHMJ89	2560	786765	AL353760	10017	1-440 470-1166 1737-5343 5455-6170



					6814-6950 7356-8416 10213-10336 10460-10627 10656-11870
HCHMJ89	2560	786765	AL139410	10018	1-130 1147-1704 2373-2416 2507-3019 3056-3180 3335-3656 3695-3784
HCHMI96	2561	800129	U91323	10019	1-586 1448-1702 2440-2932 3527-3569 3822-3926 4216-4627 8710-8764
HCHMI96	2561	800129	U91323	10020	1-367
HCHMI96	2561	800129	U91323	10021	1-684
HCHCI07	2563	952957	AL031666	10022	1-956
HCHCI07	2563	952957	AL031666	10023	1-162
HCHCI07	2563	952957	AL031666	10024	1-287
HCHCG28	2565	686431	AC008720	10025	1-2147 3523-3676 3898-4059
HCHCG28	2565	686431	AC008720	10026	1-87
HCHCE78	2566	773428	AC016135	10027	1-845
HCHCE78	2566	773428	AC022305	10028	1-878
HCHCE78	2566	773428	AC018512	10029	1-776
HCHCE78	2566	773428	AC002518	10030	1-150
HCHBQ27	2567	682308	AC022466	10031	1-191
HCHBQ27	2567	682308	AC016135	10032	1-845
HCHBQ27	2567	682308	AC022305	10033	1-878
HCHBQ27	2567	682308	AC018512	10034	1-776
HCHBQ27	2567	682308	AC069145	10035	1-302
HCHBQ27	2567	682308	AC002518	10036	1-150
HCHBQ27	2567	682308	AC022466	10037	1-358
HCHBQ27	2567	682308	AC069145	10038	1-75
HCHBN09	2568	625420	AC023572	10039	1-1010
HCHBN09	2568	625420	AC011630	10040	1-680
HCHBN09	2568	625420	AC013557	10041	1-743 15203-20746
HCHBN09	2568	625420	AL158197	10042	1-1678
HCHBN09	2568	625420	AC010554	10043	1-1242 1316-3871

					4275-5565 6216-6811 7004-7388 7749-8799 9220-10381 10766-12026 12271-13076
HCHBN09	2568	625420	AC013557	10044	1-123
HCHBN09	2568	625420	AL158197	10045	1-260
HCHBN09	2568	625420	AC013557	10046	1-355
HCHBN09	2568	625420	AC010554	10047	1-368
HCHAG52	2572	726081	AC015679	10048	1-405
HCHAG52	2572	726081	AC015679	10049	1-222
HCHAG52	2572	726081	AC015679	10050	1-103
HCDMF96	2573	796196	AC004676	10051	1-80 563-871 1053-1408 1467-2070 4385-4481 4889-4977 5408-5903 6173-6232 6875-7016 9420-10150 11107-11627
HCDMF96	2573	796196	AC004676	10052	1-126
HCDMF96	2573	796196	AC004676	10053	1-323
HCDMC86	2575	785134	AC007337	10054	1-74 578-1317
HCDMC86	2575	785134	AC009039	10055	1-74 579-1318
HCDMC86	2575	785134	AC007337	10056	1-278
HCDMC86	2575	785134	AC009039	10057	1-278
HCDMC22	2578	672815	AC012204	10058	1-74
HCDMB91	2580	789551	AL358472	10059	1-348
HCDMB42	2581	713300	AC024971	10060	1-274
HCDMB42	2581	713300	AL078591	10061	1-283
HCDMB41	2582	711996	AC024481	10062	1-588
HCDMB27	2583	682389	AC027783	10063	1-298
HCDMB27	2583	682389	AC027576	10064	1-298
HCDMB03	2586	923316	AL030997	10065	1-325
HCDMB03	2586	923316	AL030997	10066	1-340
HCDMB03	2586	923316	AL030997	10067	1-268
HCDMA20	2587	669201	AC016874	10068	1-72 1460-2583
HCDMA20	2587	669201	AC016721	10069	1-72 1460-2583

HCDMA20	2587	669201	AC016874	10070	1-98
HCDMA20	2587	669201	AC016721	10071	1-454
HCDMA20	2587	669201	AC016874	10072	1-458
HCDMA20	2587	669201	AC016721	10073	1-98
HCBMZ07	2589	951788	AL049610	10074	1-888
HCBMZ07	2589	951788	AL049610	10075	1-296
HCBMZ07	2589	951788	AL049610	10076	1-37 1329-3923
HCBMY10	2590	961718	AL158048	10077	1-1688 1805-2714
HCBMY10	2590	961718	AC041046	10078	1-908
HCBMY10	2590	961718	AC041046	10079	1-112
HCBMY10	2590	961718	AL158048	10080	1-112
HCBMY10	2590	961718	AC041046	10081	1-703
HCBMG11	2591	965394	AC013669	10082	1-181 291-782 2171-2360 2703-3570 4336-4689 5249-5785 5817-6442 6834-7458
HCBMG11	2591	965394	AC013669	10083	1-487
HBZSG02	2593	920249	AC008053	10084	1-996
HBZSG02	2593	920249	AC008053	10085	1-112
HBZSD32	2594	699335	AC011235	10086	1-354
HBZSD32	2594	699335	AC011235	10087	1-151
HBZAJ73	2595	764479	AC073594	10088	1-729 1248-1374
HBZAJ73	2595	764479	AC068986	10089	1-729 1248-1375
HBZAJ73	2595	764479	AC010892	10090	1-729 1248-1375
HBZAJ73	2595	764479	AC073594	10091	1-555
HBZAJ73	2595	764479	AC068986	10092	1-554
HBZAJ73	2595	764479	AC010892	10093	1-554
HBZAJ26	2596	681879	AC036116	10094	1-682
HBZAJ26	2596	681879	AL358976	10095	1-682
HBZAJ26	2596	681879	AC036116	10096	1-245 1588-2237
HBZAJ26	2596	681879	AL358976	10097	1-689
HBZAJ26	2596	681879	AC036116	10098	1-689
HBZAJ26	2596	681879	AL358976	10099	1-245 1588-2237
HBZAI39	2597	847621	AC009036	10100	1-1337
HBZAI39	2597	847621	AC012320	10101	1-1338

HBZAI39	2597	847621	AC009036	10102	1-126
HBZAI39	2597	847621	AC009036	10103	1-104
HBZAI14	2598	847620	AC073635	10104	1-466
HBZAI14	2598	847620	AC073635	10105	1-676
HBZAB15	2599	660348	AC019190	10106	1-894 941-2689
HBZAB15	2599	660348	AC025171	10107	1-894 941-2485
HBZAB08	2600	959560	AP002448	10108	1-235
HBZAB08	2600	959560	AP002448	10109	1-272
HBNBL29	2603	703113	AC008915	10110	1-1744
HBNBL29	2603	703113	AC008915	10111	1-420
HBNBJ29	2604	907015	AC036160	10112	1-334
HBNBJ29	2604	907015	AC016995	10113	1-334
HBNBJ29	2604	907015	AC036160	10114	1-470
HBNBJ29	2604	907015	AC036160	10115	1-99
HBNBJ29	2604	907015	AC016995	10116	1-99
HBNBJ29	2604	907015	AC016995	10117	1-470
HBNBJ06	2605	960664	AC061996	10118	1-527
HBNBJ06	2605	960664	AC022579	10119	1-173 1341-1867 4892-4933
HBNBJ06	2605	960664	AC022579	10120	1-492
HBNBB09	2608	868924	AL365223	10121	1-73 2336-3428
HBNBB09	2608	868924	AL365223	10122	1-851
HBNAW73	2609	764716	Z99289	10123	1-1491
HBNAW73	2609	764716	Z99289	10124	1-110
HBNAW73	2609	764716	Z99289	10125	1-190 1730-1923 2881-3366 4302-4465 4635-5036 6198-6347 6938-7175 7445-7543 7995-8128 12062-13446 13544-14273
HBNAC32	2614	526549	AC018648	10126	1-855 1191-1323 3823-3881 4371-5379
HBNAC32	2614	526549	AC018648	10127	1-125 180-388 891-1383 1802-1965

					2065-2506
HBNAC28	2615	525832	AC007539	10128	1-728
HBNAC09	2617	525833	AL132713	10129	1-2438
HBNAC09	2617	525833	AL132713	10130	1-355 392-835 914-995 1054-1333 1586-1743 2135-2199
HBNAC09	2617	525833	AL132713	10131	1-124
HBNAC02	2618	921187	AL133523	10132	1-188
HBNAC02	2618	921187	AL133523	10133	1-1700 1768-2230 2511-2678 3146-6917 8428-8644 8873-9205 11616-11679 14711-14834 15647-16163 17626-17691 18185-18607 20796-20845
HBNAC02	2618	921187	AL133523	10134	1-113 2404-2767 2862-3319 3371-3750 3847-4180 6007-6752 8810-9371
HBGTT76	2619	903653	AC006512	10135	1-658 3090-3543 4479-5105 5885-6846 7103-9707 9914-10293 11523-12034 12067-12181 13769-14031 14199-14291 14584-14790 15123-15154 17039-17482 17539-17987 18697-19052 19112-19380 20023-20268

					21158-21598 21817-22221 23565-23665 23906-24076 24981-25506 25510-25861 25981-26645 26661-27449 27717-27812 27991-28024 28437-28888 29651-33442 33621-34089 34245-34808 34819-35284 35854-35960 38525-38771
HBGTT76	2619	903653	AC006512	10136	1-315 439-531 707-1080 1144-1227 1491-1845 2113-2321 2700-3556 3818-4307 4336-4813 4958-5775
HBGTT76	2619	903653	AC006512	10137	1-738
HBGTE11	2620	965121	AF037222	10138	1-34 504-637 1210-2684 3241-3528 3799-4114 4225-4439 4754-4886 5520-6004 6811-6950 8255-8470 9691-10480 10798-11383 12144-12327 12452-12657 12889-13456 13751-13876 13921-14373 14745-15119 15895-16112

					16289-16338 16453-17862
HBGTE11	2620	965121	AL049840	10139	1-34 527-678 1208-2682 3785-4100 4211-4425 5506-5990 6797-6936 8241-8456 9677-10466 10784-11369 12130-12313 12438-12643 12875-13442 13740-13862 13907-14359 14731-15105 15881-16098 16275-16324 16440-17849
HBGTE11	2620	965121	AF037222	10140	1-126
HBGTE11	2620	965121	AF037222	10141	1-941 1055-1957
HBGTE11	2620	965121	AL049840	10142	1-126
HBGTE11	2620	965121	AL049840	10143	1-1797
HBGQS88	2621	886650	AC004152	10144	1-1226
HBGNL85	2622	848179	AL359510	10145	1-340 433-1692
HBGNL85	2622	848179	AL359510	10146	1-620
HBGND04	2623	926973	AC011686	10147	1-50 2676-3023 3161-3501 3760-4076 5867-6062 6851-7280 7581-8170
HBGND04	2623	926973	AP000560	10148	1-1137 1749-2085 4498-4845 4983-5323 5582-5898 7689-7884 8673-9102 9403-9993
HBGND04	2623	926973	AP001324	10149	1-50 2675-3022

					3159-3500 3759-4075 5866-6061 6851-7280 7581-8170
HBGND04	2623	926973	AP000560	10150	1-93
HBGND04	2623	926973	AC011686	10151	1-3688 3726-3971 4813-5933 6168-6648
HBGND04	2623	926973	AP001324	10152	1-2189
HBGND04	2623	926973	AP000560	10153	1-2577
HBGMT82	2624	954374	AP000449	10154	1-1171 1258-1698
HBGMT82	2624	954374	AC055871	10155	1-1174 1258-2167 2367-2591 2949-3669
HBGMT82	2624	954374	AJ002553	10156	1-286
HBGMT82	2624	954374	AC051660	10157	1-1173 1256-2164 2364-2588 2946-3665 3840-4059 4135-4280
HBGMT82	2624	954374	AJ002553	10158	1-137 586-767
HBGMT82	2624	954374	AC051660	10159	1-473
HBGMT82	2624	954374	AC051660	10160	1-82 433-487 583-1153 1232-1412
HBGMS69	2625	754392	AC010427	10161	1-757
HBGMS69	2625	754392	AC026740	10162	1-757
HBGMS69	2625	754392	AC016498	10163	1-757
HBGMS69	2625	754392	AC010427	10164	1-424
HBGMS69	2625	754392	AC026740	10165	1-115 765-1186
HBGMS69	2625	754392	AC010427	10166	1-416
HBGMS69	2625	754392	AC016498	10167	1-424
HBGMS69	2625	754392	AC026740	10168	1-227 229-411
HBGMS69	2625	754392	AC016498	10169	1-417
HBGMO78	2626	773043	AL139220	10170	1-877 1373-1821 2802-3760 3769-4392



					4968-5660
HBGMO78	2626	773043	AL357079	10171	1-878 1374-1822 2800-3758 3767-4390 4968-5660
HBGMO78	2626	773043	AC005038	10172	1-878 1374-1822 2803-3761 3770-4393 5226-5663 5775-5902 6120-6317 9252-9488 9701-10068 11666-11809
HBGMO78	2626	773043	AC005038	10173	1-1280 1472-1999 2116-3378
HBGMO78	2626	773043	AC005038	10174	1-1182 1260-1342 1447-2170 2566-3297 3550-3759 4478-4598 4690-4919 5109-5311
HBGMG81	2627	880276	AC026905	10175	1-38
HBGMG81	2627	880276	AC027551	10176	1-38
HBGMG81	2627	880276	AL365398	10177	1-47
HBGMG81	2627	880276	AC020714	10178	1-440 1153-1430
HBGMG81	2627	880276	AC006512	10179	1-247 2812-2918 3488-3953 3964-4527 4683-5151 5330-9121 9884-10335 10748-10781 10960-11055 11323-12111 12127-12791 12911-13262 13266-13791 14696-14866 15107-15207

					16551-16955 17174-17614 18504-18749 19392-19660 19720-20075 20785-21233 21290-21733 23618-23649 23982-24188 24481-24573 24741-25003 26591-26705 26738-27249 28479-28858 29065-31669 31926-32887 33667-34293 35229-35682 38114-38771
HBGMG81	2627	880276	AC027551	10180	1-131
HBGMG81	2627	880276	AC020714	10181	1-842
HBGMG81	2627	880276	AC006512	10182	1-818 963-1440 1469-1958 2220-3076 3455-3663 3931-4285 4549-4632 4696-5069 5245-5337 5461-5775
HBGMG81	2627	880276	AC020714	10183	1-1160
HBGMG81	2627	880276	AC006512	10184	1-738
HBGFS88	2628	914032	AC010687	10185	1-144 1186-2261
HBGFS88	2628	914032	AC005369	10186	1-649 870-1459 2153-2236 2499-2621 2722-2856 3368-3523 4084-4227 4315-4423 4652-4777 5094-5193 5519-5647 5739-5983

					6144-6260 6507-6661 7019-8042 8949-9295 9392-9485 10579-10703 11915-11969 11976-12107 12491-12570 12627-13146 14186-15261
HBGFS88	2628	914032	AC010687	10187	1-109
HBGFS88	2628	914032	AC005369	10188	1-109
HBGFS88	2628	914032	AC005369	10189	1-86 357-503
HBGFG53	2629	727748	AC026666	10190	1-791
HBGFG53	2629	727748	AC026283	10191	1-1463
HBGFG53	2629	727748	AC026666	10192	1-244
HBGFG53	2629	727748	AC026283	10193	1-319
HBGFG53	2629	727748	AC026283	10194	1-297 330-1653
HBGDA74	2632	832888	AP001100	10195	1-102 420-643 761-840 1681-1796 1917-2066 2158-2417 3079-3200 3281-3345 3436-4001 4062-4625
HBGDA74	2632	832888	AP000481	10196	1-64 188-337 429-688 1350-1471 1552-1616 1707-2271 2332-2895
HBGDA74	2632	832888	AP000481	10197	1-540 1012-1076 1166-1313 1698-1760 1787-1874 1971-2103 2575-2765 3027-3073
HBGDA74	2632	832888	AP001100	10198	1-540

					1012-1076 1166-1198
HBGBG52	2635	522424	AL136458	10199	1-294 506-707 1776-2011 2535-4755 5405-5870 5873-6187 7245-7361 7501-7967 9091-9694 9825-10069 10913-11066 11815-12127
HBGBG52	2635	522424	AC069042	10200	1-245
HBGBG52	2635	522424	AL162739	10201	1-245
HBGBG52	2635	522424	AL136458	10202	1-112
HBGBG52	2635	522424	AL162739	10203	1-604
HBGBB78	2638	773930	AC008403	10204	1-1630 2058-2480 4161-4577 5334-5745 6732-6865 7024-7163 10746-11227 11908-12229 12481-13862
HBGBB78	2638	773930	AC008403	10205	1-482 2074-2191 3067-3427 3514-3666 4176-4250 4718-4839 5313-5692 10395-10491 10694-10779 11107-11256 12127-12209 12283-12405 12543-13031 13771-14040
HBGBB78	2638	773930	AC008403	10206	1-128 172-232 1302-2232
HBCPO75	2640	927520	AC069279	10207	1-596 4098-4739 5478-5650

					6045-6577 6988-7374
HBCPK03	2641	922493	AC011719	10208	1-923
HBCPK03	2641	922493	AP001104	10209	1-923
HBCPK03	2641	922493	AP001324	10210	1-923
HBCJP02	2642	917981	AP000795	10211	1-935 1442-2055 2120-2651
HBCJP02	2642	917981	AC018775	10212	1-935 1442-2055 2120-2653
HBCJP02	2642	917981	AC011088	10213	1-254 1365-1474 2669-2833 3184-3483 3853-4390 9055-9989 10496-11109 11174-11705 14770-14905 15601-16949 24077-24508 25195-25367 27155-27556 28055-28776 29078-30192 35093-35409 37099-37222 37906-38308 39047-39871 40730-41079 41464-41939 42882-44161
HBCJP02	2642	917981	AC011088	10214	1-379
HBCJG07	2643	951898	AL158821	10215	1-179 415-1143
HBCJG07	2643	951898	AL158821	10216	1-401 691-974 1279-2180
HAUCC58	2644	764851	AC006329	10217	1-159 388-562 976-1372 1647-1772 1796-2110 2230-2442 3917-4291 4695-4807

					4854-4990 5212-5512 6837-7180 7293-7754 8183-8372 8413-8665 9645-9815 10677-11353 11786-12287 12400-13026
HAUCC58	2644	764851	AC006329	10218	1-338 1214-1745
HAUAS89	2646	518847	AC008044	10219	1-119 2461-2803 4346-4547 5141-5577 7669-7807 7933-8244 8849-8944 9208-10426 12618-12735 13747-14129 14744-15306
HAUAS89	2646	518847	AC008044	10220	1-55 3400-3593
HAUAS89	2646	518847	AC008044	10221	1-495
HAUAQ28	2647	685374	AC027523	10222	1-1260
HAUAQ28	2647	685374	AC011774	10223	1-1260
HAUAQ28	2647	685374	AP001848	10224	1-1260
HAUAQ28	2647	685374	AC027523	10225	1-535
HAUAQ28	2647	685374	AC011774	10226	1-535
HAUAQ28	2647	685374	AP001848	10227	1-535
HACMR08	2650	955638	AC012318	10228	1-147
HACMR08	2650	955638	AL121844	10229	1-219
HACMR08	2650	955638	AC013553	10230	1-280 2514-2880 3507-3803 5834-5958 8010-8114 9356-9430 13100-13296 14272-14676 14966-15305 15968-16340 16952-17049 17302-17464 18685-19018

					19824-20193 20412-20822 21304-21778 22964-23210 23327-23714 24031-24645 24690-24771 26370-27118
HACMR08	2650	955638	AL121656	10231	1-2346 2487-3703 3832-4167

[074] Table 1B summarizes additional polynucleotides encompassed by the invention (including cDNA clones related to the sequences (Clone ID NO:Z), contig sequences (contig identifier (Contig ID:) contig nucleotide sequence identifiers (SEQ ID NO:X)), and genomic sequences (SEQ ID NO:B). The first column provides a unique clone identifier, "Clone ID NO:Z", for a cDNA clone related to each contig sequence. The second column provides the sequence identifier, "SEQ ID NO:X", for each contig sequence. The third column provides a unique contig identifier, "Contig ID:" for each contig sequence. The fourth column, provides a BAC identifier "BAC ID NO:A" for the BAC clone referenced in the corresponding row of the table. The fifth column provides the nucleotide sequence identifier, "SEQ ID NO:B" for a fragment of the BAC clone identified in column four of the corresponding row of the table. The sixth column, "Exon From-To", provides the location (i.e., nucleotide position numbers) within the polynucleotide sequence of SEQ ID NO:B which delineate certain polynucleotides of the invention that are also exemplary members of polynucleotide sequences that encode polypeptides of the invention (e.g., polypeptides containing amino acid sequences encoded by the polynucleotide sequences delineated in column six, and fragments and variants thereof).

## **TABLE 2**



Clone ID NO:Z	Contig ID:	SEQ ID NO:X	Analysis Method	PFam/NR Description	PFam/NR Accession Number	Score/ Percent Identity	NT From	NT To
H7MDD72	847688	13	blastx.2	(AF034780) lysophingolipid receptor Edg5 [Homo sapiens]	gb AAC98919.1	95%	597	7
H7MDD72	887805	2651	HMMER 1.8	PFAM: 7 transmembrane receptor (rhodopsin family)	PF00001	118	75	668
HAOSH55	952380	14	blastx.2	(AF200357) pantothenate kinase 1 beta [Mus musculus]	gb AAF23952.1 AF2 00357_1	78%	2	337
HAQAK73	764671	15	blastx.2	galactosylceramide-like protein, GCP - human	pir JC5238 JC5238	65%	129	7
HAQBJ71	839982	18	blastx.2	BasR [Escherichia coli]	dbj BAA03143.1	97% 51%	127 392	2 123
HBCJS08	957826	23	blastx.2	(AK002129) unnamed protein product [Homo sapiens]	dbj BAA92096.1	66%	188	346
HGBG42	922396	30	blastx.2	(AF161472) HSPC123 [Homo sapiens]	gb AAF29087.1 AF1 61472_1	50%	85	315
HGBT79	525352	33	blastx.2	Invasin. [Escherichia coli]	dbj BAA15799.1	58% 49% 87%	35 3 199	331 209 246
HGBW60	954916	34	blastx.2	paired-like homeodomain protein PRX2 [Homo sapiens]	gb AAB39864.1	100%	101	235
HBGDE85	524875	37	blastx.2	core protein [Escherichia coli]	gb AA24544.1	90%	1	126

HBGDS13	971696	38	HMMER 1.8	PFAM: Zinc finger, C2H2 type	PF00096	4.57	167	211
			blastx.2	rhaR (AA 1-312) [Escherichia coli]	emb CAA29453.1	86%	257	129
HBGDT43	974223	39	blastx.2	(AK000496) unnamed protein product [Homo sapiens]	dbj BAA91205.1	92%	141	100
						80%	445	311
HBGMD05	870189	41	blastx.2	Fos-related antigen [Rattus norvegicus]	gb AAA79137.1	88%	4	207
HBGMZ39	947112	45	HMMER 2.1.1	PFAM: Cytochrome P450	PF00067	59.5	509	372
			blastx.2	cytochrome P450 2B - green monkey	pir JT0676 JT0676	43%	563	372
						43%	299	168
						40%	165	121
HBGND09	848219	47	blastx.2	(AF156271) RING finger protein terf [Homo sapiens]	gb AAD40286.1	97%	2	367
HBGNM13	912730	49	blastx.2	(AE000420) putative regulator [Escherichia coli]	gb AAC76465.1	97%	188	75
HBGNO07	952212	50	blastx.2	(AK000496) unnamed protein product [Homo sapiens]	dbj BAA91205.1	81%	383	303
						33%	169	53
HBGNQ31	887152	51	blastx.2	(AF022821) putative potassium channel DP4 [Mus musculus]	gb AAD09338.1	56%	10	183
HBGPH02	918513	58	blastx.2	alpha 1C adrenergic receptor isoform 2 [Homo sapiens]	dbj BAA06901.1	71%	452	327
						93%	339	292
						69%	292	254

HCBGPV05	930706	60	blastx.2	(AE000157) orf, hypothetical protein [Escherichia coli]	gb AAC73617.1	77%	617	36
HCBGTR84	886529	65	blastx.2	(AL137718) hypothetical protein [Homo sapiens]	emb CAB70890.1	47%	555	346
HCBNAY58	558193	72	blastx.2	human elongation factor-1-delta [Homo sapiens]	emb CAA79716.1	76%	619	545
HCBNW02	950897	80	blastx.2	(AC008372) unknown [Homo sapiens]	gb AAF23326.1 AC008372.2	30%	21	581
HCBGOG03	922351	82	HMMER 1.8	PFAM: Zinc finger, CCHC class	PF000098	73%	263	400
HCHAD40	923764	88	blastx.2	unidentified reading frame [Escherichia coli]	emb CAA23893.1	44%	1	270
HCHBQ03	923763	92	blastx.2	unidentified reading frame [Escherichia coli]	emb CAA23893.1	6.1	95	112
HCHND96	880585	94	blastx.2	(AF141920) roadblock [Drosophila melanogaster]	gb AAD45986.1 AF141920.1	85%	211	152
HCHOA76	740102	95	blastx.2	(AK000385) unnamed protein product [Homo sapiens]	dbj BAA91131.1	87%	311	264
HCHOD89	954866	96	blastx.2	cytochrome P450 2C34v2 [Sus scrofa]	gb AAA79105.1	100%	264	226
HCHQB06	934941	98	blastx.2	(AK001623) unnamed protein product [Homo sapiens]	dbj BAA91793.1	87%	325	302
HCOOZ11	965306	105	HMMER 1.8	PFAM: Src homology domain 3	PF00018	98%	334	158
						75%	174	455
						64%	499	335
						75%	266	195
						58%	336	286
						53%	94	189
						33%	6	86
						89%	183	440
						5.22	179	214

			blastx.2	(AL022238) dJ1042K10:2 (supported by GENSCAN, FGENES and GENEWISE) [Homo sapiens]	emb CAA18266.1	100%	182	589
HEAAA42	963100	111	HMMER 1.8	PFAM: Zinc finger, C2H2 type	PF00096	20.88	114	176
			blastx.2	(AF117814) odd-skipped related 1 protein [Mus musculus]	gb AAD37115.1 AF1 17814_1	79%	18	221
HEEAH07	851219	124	blastx.2	(AL137469) hypothetical protein [Homo sapiens]	emb CAB70754.1	100%	178	270
HEEAJ58	785121	125	blastx.2	(AF080470) pallid [Homo sapiens]	gb AAF08343.1 AF0 80470_1	100% 100% 66%	169 90 169	258 170 252
HEEAJ76	887321	126	blastx.2	truncated protein [Saccharomyces cerevisiae]	gb AAB31222.1	87%	94	23
HEEAW01	851213	133	blastx.2	(AK000385) unnamed protein product [Homo sapiens]	dbj BAA91131.1	72%	371	210
HEGAB84	823900	137	HMMER 2.1.1	PFAM: Ank repeat	PF00023	36.9	205	315
			blastx.2	ankyrin 3 [Mus musculus]	gb AAB01605.1	37%	28	348
HEGAI82	955291	140	blastx.2	putative [Rattus norvegicus]	emb CAA52297.1	58% 96% 31%	1 370 179	276 453 283
HEGAO83	780837	142	HMMER 1.8	PFAM: IG (immunoglobulin)	PF00047	9.4	234	305

HEGAZ61	950033	149	HMMER 2.1.1 blastx.2	superfamily PFAM: Reprolysin family propeptide epididymal apical protein I-precursor [Macaca fascicularis]	PF01562 emb CAA46929.1	141.4 92%	276 60	560 560
HEPAB70	557149	151	blastx.2	ORF_ID:o209#7 [Escherichia coli]	dbj BAA35540.1	83% 87% 90%	99 43 326	329 141 355
HEPAP02	926914	160	blastx.2	WW domain binding protein-1 [Homo sapiens]	gb AAD10950.1	100%	59	163
HEPBA39	919875	163	HMMER 1.8 blastx.2	PFAM: lipocalins (AF109472) epididymal protein 52 [Oryctolagus cuniculus]	PF00061 gb AAC98311.1	26.73 42%	117 314	509 66
HEPBH38	707524	169	blastx.2	(AK000385) unnamed protein product [Homo sapiens]	dbj BAA91131.1	53%	319	146
HEPCT32	947081	179	blastx.2	(AJ243311) matrix metalloproteinase-2 [Equus caballus]	emb CAB46656.1	32% 39% 32% 27%	262 262 24 18	636 477 269 275
HEPCU32	931824	180	HMMER 1.8 blastx.14	PFAM: lipocalins mE-RABP minor form protein [Mus musculus]	PF00061 gi 3241966 gb AAC2 4316.1	11.52 30% 20% 60%	508 502 336 279	627 630 482 308
HEPCU32	946975	2652	HMMER	PFAM: lipocalins	PF00061	11.52	405	524

HEQAE65	911438	181	1.8 blastx.14	mE-RABP minor form protein [Mus musculus]	gi 3241966 gb AAC2 4316.1	30% 20% 60%	399 233 176	527 379 205
HEQAH70	699690	182	HMMER 2.1.1 blastx.2	PFAM: Myosin head (motor domain) (AF234532) myosin X [Homo sapiens]	PF00063	35.1	50	148
HEQAO76	769973	183	blastx.2	(AJ007558) nucleoporin 155 [Homo sapiens]	emb CAA07553.1  34532_1	100%	2	154
HETAF89	509300	189	blastx.2	(AF053944) aortic carboxypeptidase-like protein ACLP [Homo sapiens]	gb AAC25585.1	85% 97% 65%	176 49 288	343 171 347
HETAH66	799665	191	blastx.2	(AF209069) hypothetical protein [Homo sapiens]	gb AAC25585.1	100% 100% 34% 34% 31% 36% 24% 57% 35%	148 1 266 269 329 311 266 390 314	201 45 430 400 433 424 415 431 418
HETAZ13	536192	201	HMMER 1.8	IgE-binding factor [Mus musculus]	gb AA37291.1	57% 37%	109 20	216 115
HETDI03	925489	217	blastx.2	PFAM: Src homology domain 3 zinc finger protein ZNF133 [Homo sapiens]	PF00018	3.73	165	245
HETDI03	925489	217	blastx.2	zinc finger protein ZNF133 [Homo sapiens]	gb AAC50260.1	78% 70% 74%	18 15 15	131 134 131

HETDP21	525407	220	HMMER 1.8	PFAM: Zinc finger, C3HC4 type (RING finger) (AF0344745) LNXp80 [Mus musculus]	PF00097	66% 73% 60% 71% 62% 64% 65%	18 18 18 18 18 18 18	143 131 146 131 146 134 140
HETFC82	799658	227	HMMER 1.8	PFAM: Bacterial mutT protein	PF00293	3.03	418	480
			blastx.2	(AF0344745) LNXp80 [Mus musculus]	gb AAC40075.1	92% 61%	218 112	292 216
HETFI24	954104	230	HMMER 1.8	(AL035291) hypothetical protein [Homo sapiens]	emb CAA22894.1	94%	7	531
			blastx.2	PFAM: Spectrin alpha chain, repeated domain	PF00435	9.64	628	690
HETFM43	973702	233	HMMER 1.8	myosin II heavy chain [Naegleria fowleri]	gb AAB01786.1	25% 20%	355 204	1146 434
			blastx.2	(AK002129) unnamed protein product [Homo sapiens]	dbj BAA92096.1	80% 53% 88%	200 303 268	262 347 294
HETGL74	947978	237	HMMER 1.8	PFAM: IG (immunoglobulin) superfamily	PF00047	15.57	213	392
			blastx.2	FOLLISTATIN-LIKE 2 (FOLLISTATIN-LIKE PROTEIN).	sp Q61581 Q61581	36%	132	440

HETHO63	745503	244	blastx.2	rhophilin [Mus musculus]	gb AAC52388.1	51%	160	450
						35%	47	157
HETHR24	851412	246	HMMER 2.1.1	PFAM: Fibrillar collagen C-terminal domain	PF01410	53.4	201	308
			blastx.2	type V collagen [Gallus gallus]	gb AAB41274.1	65%	213	308
						48%	86	214
						41%	336	437
HETIF01	966185	248	blastx.2	fused-ccdB [Escherichia coli]	emb CAA71575.1	94%	122	223
HETIJ84	766589	250	blastx.2	(AF161432) HSPC314 [Homo sapiens]	gb AAF28992.1 AF161432_1	75%	1	246
HETJX04	927120	262	HMMER 2.1.1	PFAM: C2 domain	PF00168	150.4	9	260
			blastx.2	(AB025258) granuphilin-a [Mus musculus]	dbj BAA84656.1	94%	6	683
						57%	685	831
						48%	719	859
HETJY11	966194	263	blastx.2	(AK000496) unnamed protein product [Homo sapiens]	dbj BAA91205.1	70%	3	227
HETKV26	910030	270	HMMER 2.1.1	PFAM: Oxysterol-binding protein	PF01237	67	2	364
HETKZ65	941045	272	blastx.14	(AF067972) DNA cytosine methyltransferase 3 alpha [Homo sapiens]	gi 4927370 gb AAD33084.1 AF067972_1	84%	63	500
						72%	455	520
						100%	520	537
HLWAH41	944774	283	HMMER 2.1.1	PFAM: ENV polyprotein (coat polyprotein)	PF00429	150	82	714
			blastx.2	(AF108843) env protein [Homo sapiens]	gb AAD34324.1	50%	67	711
HLWAI13	920690	284	blastx.14	(AL117538) hypothetical	gi 5912069 emb CAB	100%	496	588



HLWAJ64	746460	285	HMMER 1.8	protein [Homo sapiens] PFAM: Zinc finger, CCHC class	55984.1  PF00098	6.51	357	337
HLWAK69	694216	286	HMMER 1.8	PFAM: Zinc finger, C2H2 type	PF00096	6.05	118	168
HLWAR77	947484	288	HMMER 1.8	PFAM: 7 transmembrane receptor (rhodopsin family)	PF00001	214.2	1287	553
			blastx.2	(AF119815) G-protein- coupled receptor [Homo sapiens]	gb AAD22047.1	99%	1287	292
HLWBQ84	782938	299	HMMER 1.8	PFAM: HMG (high mobility group) box	PF00505	9.46	21	110
HLWFG82	929647	317	HMMER 2.1.1	PFAM: Immunoglobulin domain	PF00047	32.6	121	330
			blastx.2	Frazzled [Drosophila melanogaster]	gb AAC47314.1	37%	52	411
HNOAX12	969363	330	blastx.2	line-1 reverse transcriptase [Homo sapiens]	gb AAC51337.1	43%	488	535
						41%	710	465
HODAG37	529410	339	blastx.2	(AC004416) WUGSC:H_RG013N12.g w.1335199.a gene product [Homo sapiens]	gb AAC06181.1	54%	229	131
						58%	137	87
HODBT58	678444	355	blastx.2	(AF118086) PRO1992 [Homo sapiens]	gb AAF22030.1 AF1 18094 25	69%	1	129
HODCV09	973487	375	blastx.2	(AF034209) RIG-like 5-6 [Homo sapiens]	gb AAB92665.1	100%	130	207
HODDQ21	919295	392	blastx.2	(AF161393) HSPC275	gb AAF28953.1 AF1	96%	3	245

HODDS67	567197	394		blastx.2	[Homo sapiens] (AK001614) unnamed protein product [Homo sapiens]	61393 1 dbj BAA91790.1	100% 100%	69 14	164 67
HODER91	789661	419		HMMER 1.8 blastx.2	PFAM: Zinc finger, C2H2 type (AC007059) Human homolog of Mus musculus wizL protein [AA 4-1561] [Homo sapiens]	PF00096 gb AAD19818.1	11.06 35%	163 1	225 294
HODEX10	926260	423		HMMER 1.8	PFAM: Helicases conserved C-terminal domain	PF00271	9.2	22	54
HODFQ06	934304	451		blastx.2	(AK00496) unnamed protein product [Homo sapiens]	dbj BAA91205.1	48% 60%	466 537	254 454
HODFY16	958329	459		HMMER 1.8	PFAM: Phorbol esters / diacylglycerol binding domain	PF00130	3.15	175	213
HODGC61	973449	463		HMMER 1.8	PFAM: Protein-tyrosine phosphatase	PF00102	6.61	130	222
HODGH02	917969	465		blastx.2	IDN4-GGTR14 PROTEIN.	sp Q9Y6Y5 Q9Y6Y5	94%	17	118
HODGH04	926255	466		blastx.2	IDN4-GGTR14 PROTEIN.	sp Q9Y6Y5 Q9Y6Y5	51%	8	247
HODGJ67	974297	471		blastx.14	pol gene protein; Xxx [Homo sapiens]	gi 1196424 gb AAA8 8026.1	70%	132	284
HODGP95	908650	477		HMMER 1.8	PFAM: Zinc finger, C2H2 type	PF00096	18.49	209	271

HODGQ22	974290	blastx.2	(AC005498) R31665_1 [Homo sapiens]	gb AAC32422.1	61%	125	310
					52%	146	310
					53%	146	292
					41%	125	310
					34%	74	334
					50%	146	307
					51%	164	310
					46%	164	310
					47%	307	357
					47%	307	357
					47%	307	357
					50%	310	357
					35%	307	357
					41%	307	357
HODGQ92	894368	blastx.2	hypothetical protein Tigger 2 - human transposon MER37.1	pir S72489 S72489	47%	235	2
					57%	287	231
HODGQ92	894368	HMMER 2.1.1	PFAM: RhoGAP domain	PF00620	30.1	2	124
		blastx.2	(AC002398) F25965_3 [Homo sapiens]	gb AAB81198.1	63%	142	399
HOFAD05	932211	blastx.14	unknown [murine herpesvirus 68]	gi 2318003 gb AAB6 6461.1	72%	2	133
					39%	263	180
HOFMB78	572941	blastx.2	ribosomal protein L7a large subunit [Homo sapiens]	gb AAA60282.1	45%	192	127
					85%	120	100
HOFMB78	572941	HMMER 1.8	PFAM: Laminin B (Domain IV)	PF00052	1.62	286	330
		blastx.2					
HOFMB78	572941	blastx.2			72%	49	399
					61%	236	397
					50%	44	91

HOFMF03	924679	516	blastx.2	U88 [Human herpesvirus 6]	emb CAA58337.1	54%	298	116
						49%	298	116
						50%	295	116
						51%	295	116
						54%	298	116
						50%	295	116
						51%	289	116
						55%	298	116
						48%	295	116
						46%	295	116
						52%	298	116
						48%	289	116
						43%	295	116
						51%	295	116
						49%	298	116
						45%	295	116
						43%	295	116
						46%	295	116
						45%	295	116
						54%	297	115
						43%	295	116
						43%	295	116
						45%	295	116
						46%	295	116
						44%	289	116
						44%	289	116
						43%	295	116
						44%	289	116
						46%	289	116
						43%	295	116

HOFMF70	734917	517	HMMER 2.1.1 blastx.2	PFAM: Connexin (AJ004856) connexin31 [Homo sapiens]	emb CAA06165.1	43% 48% 43% 41% 44% 41% 42%	295 289 289 295 342 339 297	116 116 116 116 115 115 115
HOFMG21	973358	518	HMMER 2.1.1 blastx.14	PFAM: MAS20 protein import receptor mitochondrial outer membrane protein 19 [Homo sapiens]	PF02064	33.6	105	248
HOFMH12	964722	519	blastx.2	19 kDa subunit of NADH:ubiquinone oxidoreductase complex (complex I) [Bos taurus]	emb CAA42218.1	66% 64%	83 312	457 476
HOFMH38	920365	520	HMMER 2.1.1 blastx.2	PFAM: TCP-1/cpn60 chaperonin family unnamed protein product [unidentified]	PF00118	104.8	102	287
HOFMI62	796358	523	blastx.2	(AJ388527) Ribosomal protein [Canis familiaris]	emb CAB46829.1	96% 96% 66%	40 231 320	228 323 355

HOFMJ44	719663	525	HMMER 2.1.1 blastx.2	PFAM: Ribosomal protein S27 (AF070668) 40S ribosomal protein S27 isoform [Homo sapiens]	PF01667	38% 109.1	35 128	88 265
HOFMM72	464015	528	blastx.2	(AL117557) hypothetical protein [Homo sapiens]	emb CAB55992.1	65%	61	366
HOFMP79	775242	531	HMMER 2.1.1 blastx.2	PFAM: GrpE mt-GrpE#1 precursor [Rattus norvegicus]	PF01025	49.4	173	358
HOFMQ65	789347	534	blastx.2	(AL050369) hypothetical protein [Homo sapiens]	emb CAB43677.1	68% 100% 64%	113 43 354	343 147 404
HOFMS89	575820	537	blastx.2	(AF161359) HSPC096 [Homo sapiens]	gb AAF28919.1 AF1 61359_1	53% 46% 69% 72%	181 71 411 48	411 277 488 80
HOFMT43	811542	539	blastx.2	glucosephosphate isomerase [Sus scrofa]	emb CAA82246.1	50% 80% 40%	143 57 277	514 161 501
HOFMT72	563575	541	blastx.2	Huntington Disease (HD) gene exon 1 [Homo sapiens]	emb CAA92991.1	82% 50%	52 297	2 256
HOFMU63	744325	543	blastx.2	(AK000334) unnamed protein product [Homo sapiens]	dbj BAA91091.1	63%	9	245
HOFNA92	792734	547	blastx.2	(AL109701) C15orf3	emb CAB52022.1	60%	151	339

HOFNG06	935569	556	blastx.2	[Homo sapiens]	(AL133584) hypothetical protein [Homo sapiens]	emb CAB63728.1	86% 37% 33%	60 128 128	125 301 334
HOFNI08	974435	558	blastx.2	(AJ224442) methyltransferase [Homo sapiens]	emb CAA11944.1		90% 90% 100%	80 66 253	241 95 270
HOFNL18	666498	561	HMMER 1.8	PFAM: Bacterial mutT protein	PF00293		4.34	286	345
HOFNL25	916963	562	HMMER 2.1.1	PFAM: Ribosomal L18ae protein family	PF01775		250.8	62	331
HOFNL37	906250	563	blastx.2	ribosomal protein L18a - rat	pir S03957 R5RT18		73%	47	514
HOFNT59	615305	567	blastx.2	vimentin [Mus musculus]	dbj BAA19834.1		51% 41% 100%	204 175 140	377 396 178
HOFNU72	705435	568	blastx.2	(AB026125) ART-4 [Homo sapiens]	dbj BAA86961.1		59% 42%	146 18	451 479
HOFNW79	973351	570	blastx.2	(AF086708) 26S proteasome subunit 11 [Homo sapiens]	gb AAC64104.1		94% 95% 81%	46 200 261	204 259 308
HOFNY50	715312	572	blastx.2	(AJ388527) Ribosomal protein [Canis familiaris]	emb CAB46829.1		96% 100% 84% 38%	85 276 365 80	273 362 403 133
				(AF047704) tufelin [Mus musculus]	gb AAC04577.1		92% 81%	224 127	388 222

HOFOB88	751692	579	blastx.2	(AF139185) myomegalin [Rattus norvegicus]	gb AAD29427.1	68%	69	143
HOFOB91	827631	580	blastx.2	nucleobindin [Homo sapiens]	gb AAA36383.1	90%	393	425
HOFOF57	666909	582	blastx.2	T28D6.9 [Caenorhabditis elegans]	emb CAB54316.1	58%	427	477
HOGAF39	947431	584	blastx.14	cyclin A/CDK2- associated p45 [Homo sapiens]	gi 995826 gb AAC50 242.1	80%	13	369
HOGCX95	890607	591	HMMER 1.8	PFAM: Retroviral aspartyl proteases	PF00077	86%	87	233
HOGEE76	968956	592	blastx.14	No definition line found [Caenorhabditis elegans]	gi 397275 gb AAB0 3138.1	85%	23	43
HOVBY34	706816	602	blastx.2	(AK002129) unnamed protein product [Homo sapiens]	dbj BAA92096.1	43%	141	347
HOVCD39	705406	605	blastx.2	(AF118081) PRO1900 [Homo sapiens]	gb AAF22025.1 AF1 18094 20	57%	347	388
HOVEK70	909138	615	HMMER 2.1.1	PFAM: Zinc finger, C2H2 type	PF00096	47%	78	179
			blastx.2	Bowel [Drosophila melanogaster]	gb AABI7949.1	45%	2	73
						42%	216	257
						32.8	205	504
						36%	650	790
						60%	599	643
						27%	500	586
						80%	177	40
						70%	20	151
						68.7	225	293
						88%	93	377
						35%	111	431
						34%	132	377
						85%	2	82
						32%	81	209



HPDOT03	922481	635	blastx.14	(AF061346) Edp1 protein [Mus musculus]	gi 3114713 gb AAC7 8826.1	33%	368	457
HPDPJ69	966158	637	blastx.14	envelope protein [Homo sapiens]	gi 1196425 gb AAA8 8027.1	53% 62%	92 13	226 108
HPDRG92	967704	643	blastx.14	2-oxoglutarate dehydrogenase precursor [Homo sapiens]	gi 531241 dbj BAA01 393.1	82% 73% 35% 75%	7 237 1 279	234 326 60 302
HPEKG18	914115	656	blastx.14	(AB012223) ORF2 [Canis familiaris]	gi 2981631 dbj BAA2 5253.1	75%	96	10
HPFEA08	960372	700	HMMER 1.8	PFAM: HMG (high mobility group) box	PF00505	5.1	68	148
HPIAS40	928614	708	blastx.14	(AF044954) NADH:ubiquinone oxidoreductase PDSW subunit [Homo sapiens]	gi 4164442 gb AAD0 5419.1	96% 88% 92% 53%	68 304 262 384	232 384 303 461
HPIAX11	925424	710	blastx.2	(AL031427) dJ167A19.1 (novel protein) [Homo sapiens]	emb CAB46721.1	63% 78%	342 449	569 604
HPIAZ37	655753	711	HMMER 1.8	PFAM: ATP synthase A chain	PF00119	11.95	68	238
HPIBQ37	884289	712	HMMER 2.1.1 blastx	PFAM: Immunoglobulin domain (AF111713) junctional adhesion molecule [Homo sapiens]	PF00047  gb AAD42050.1 AF1 11713_1	42  100% 84%	149  89 385	355  385 423
HPJCC04	926787	731	blastx.14	(AF159714) PPAR gamma coactivator-1	gi 5802182 gb AAD5 1615.1 AF159714_1	94%	249	40

HPJDA08	958182	741	blastx.14	[Homo sapiens] zinc finger 5 protein [Gallus gallus]	gi 1399185 gb AAB3 8387.1	39%	92	475
HPJET90	836503	750	HMMER 2.1.1	PFAM: Aldehyde dehydrogenase family	PF00171	150.4	66	371
HPMEG50	925080	806	blastx.14	Mst84Dc [Drosophila melanogaster]	gi 11075 emb CAA47 939.1	62% 28% 44%	7 22 126	30 105 152
HPMFL08	959569	819	HMMER 1.8	PFAM: Src homology domain 3	PF00018	4.97	209	238
HPMGF06	954823	845	blastx.14	GTP binding protein [Mus musculus]	gi 53169 emb CAA36 803.1	92%	37	564
HPMGI03	924521	848	blastx.14	(AF106933) plexin B [Drosophila melanogaster]	gi 4056676 gb AAD0 9426.1	36% 60% 63% 43% 66%	49 148 12 288 359	147 177 44 335 385
HPMGX23	575903	864	HMMER 1.8	PFAM: Helix-loop-helix DNA-binding domain	PF00010	6.66	96	194
HPMJF76	965642	875	blastx.14	pol protein [Human endogenous retrovirus K]	gi 1780973 emb CAA 71417.1	58% 40% 63%	234 28 134	326 138 199
HPMJN59	946876	877	HMMER 1.8 blastx.2	PFAM: Prolyl oligopeptidase family (AC005594) R26984_1 [Homo sapiens]	PF00326 gb AAC33801.1	21.87	138	251
HPMKM81	894416	884	HMMER 2.1.1	PFAM: Homeobox domain	PF00046	61%	138	521
HPRCC08	939490	901	blastx.14	2.19 [Homo sapiens]	gi 854082 emb CAA6	82.2	94	228
						54%	120	296

HPWAS77	908450	914	HMMER 2.1.1	PFAM: gag gene protein p24 (core nucleocapsid protein)	0645.1  PF00607	92.3	655	266
			blastx.14	gag protein [Human endogenous retrovirus K]	gi 1780975 emb CAA 71418.1	37% 38% 45% 50%	730 185 253 25	248 108 188 2
HSWAC73	710354	926	HMMER 1.8	PFAM: WD domain, G- beta repeats	PF00400	9.99	134	190
HTEAL28	963538	939	blastx.14	(AL080154) hypothetical protein [Homo sapiens]	gi 5262611 emb CAB 45745.1	36%	234	413
HTEBC74	887782	945	HMMER 1.8	PFAM: Armadillo segment protein, repeats	PF00514	20.2	58	183
HTEBY08	960427	954	HMMER 2.1.1	PFAM: Protein phosphatase 2A regulatory subunit PR55	PF01240	92.8	63	251
			blastx.14	protein phosphatase 2A1 B gamma subunit [Oryctolagus cuniculus]	gi 619215 gb AAA58 956.1	97% 87%	63 231	197 254
HTECA21	911369	962	HMMER 2.1.1	PFAM: PDZ domain (Also known as DHR or GLGF).	PF00595	57.6	100	354
			blastx.14	tyrosine phosphatase [Homo sapiens]	gi 1486367 emb CAA 56124.1	57% 51%	85 467	351 652
HTEDI02	921243	994	HMMER 2.1.1	PFAM: Leucine Rich Repeat	PF00560	36.2	346	414
			blastx.14	densin-180 [Rattus norvegicus]	gi 1657758 gb AAC5 2881.1	36% 32%	220 214	450 450

HTEDQ30	530589	1007	HMMER 2.1.1	PFAM: Ferritins	PF00210	34%	220	456
						30%	241	450
						33%	214	453
						26%	214	441
						29%	214	450
						36%	268	450
						36%	463	612
						24%	220	453
						26%	214	453
						40%	463	588
						29%	463	606
						29%	463	606
						31%	463	606
						29%	463	603
						24%	463	612
						104.6	9	164
HTEDU48	932315	1013	blastx.14	(AF176069) ubiquilin [Homo sapiens]	gi 5733824 gb AAD4 9751.1 AF176069_1	66%	11	118
						46%	305	454
						55%	587	688
						57%	452	535
						24%	251	472
						28%	293	388
						26%	332	502
						15%	311	490
						24%	569	679
						32%	184	267
						25%	329	436
HTEDY38	771505	1017	HMMER	PFAM: Zinc-binding	PF00099	2.19	9	44

HTEDY54	922964	1018	1.8 blastx.14	metalloprotease domain lysozyme [Gallus gallus]	gi 63426 emb CAA43 319.1	46% 41% 61%	696 405 234	457 220 181
HTEGM38	675087	1059	HMMER 2.1.1	PFAM: DnaJ domain	PF00226	65.2	93	197
HTEGO05	932583	1061	HMMER 2.1.1 blastx.14	PFAM: Eukaryotic protein kinase domain male germ cell-associated kinase (mak) [Rattus norvegicus]	PF00069 gi 205278 gb AAA41 562.1	50.8 85% 64% 85% 38%	3 3 489 768 1023	233 395 761 848 1100
HTEHC47	973071	1085	blastx.2	unnamed protein product [unidentified]	emb CAB42447.1	29%	112	612
HTEHI14	526687	1096	HMMER 2.1.1	PFAM: lactate/malate dehydrogenase	PF00056	50.6	222	371
HTEHS19	529280	1113	HMMER 2.1.1	PFAM: 7 transmembrane receptor (Secretin family)	PF00002	19.3	16	135
HTEHV72	920610	1117	HMMER 2.1.1	PFAM: IQ calmodulin- binding motif	PF00612	41.7	178	240
HTEIB14	963099	1127	HMMER 2.1.1 blastx.14	PFAM: Zinc finger, C2H2 type Bowel [Drosophila melanogaster]	PF00096 gi 388166 gb AABI 7949.1	53.9 90% 33% 80% 33% 46% 28% 31%	78 9 9 227 9 9 54 230	146 236 230 316 230 149 230 334

HTEIF40	958355	1128	blastx.14	(AF132972) CGI-38 protein [Homo sapiens]		gi 4680715 gb AAD2 7747.1 AF132972.1	35%	224	316
HTEIK11	967431	1136	blastx.14	Zfp-29 [Mus musculus]		gi 55471 emb CAA38 920.1	28% 50% 50% 50% 50% 44% 61% 47% 42% 38% 44% 100% 85% 85% 87% 100%	188 353 353 353 353 353 368 356 60 353 356 411 411 411 408 414	367 406 406 406 406 406 406 406 137 406 409 431 431 431 431 431
HTEIL07	953803	1139	HMMER 1.8	PFAM: EF hand		PF00036	11.27	192	263
HTEIP88	941155	1148	HMMER 2.1.1	PFAM: Transmembrane amino acid transporter protein		PF01490	34.7	1	216
HTEIU92	870652	1154	HMMER 2.1.1	PFAM: Transketolase		PF00456	70.1	1	225

HTEIV54	922027	1155	blastx.14	p18H-rev 107 [Rattus norvegicus]	gi 433963 emb CAA53991.1	40%	359	682
HTEIY80	955242	1163	blastx.14	(AF146793) protein B [Mus musculus]	gi 4836805 gb AAD30564.1 AF146793_1	65%	251	364
HTEJB15	908360	1170	HMMER 1.8	PFAM: Helicases conserved C-terminal domain	PF00271	91%	320	454
			blastx.14	vasa-like gene protein, RVLG protein=putative DEAD 1 [Rattus sp.]	gi 806464 gb AAB33364.1	74%	453	569
HTEJF45	942476	1172	HMMER 1.8	PFAM: Zinc-binding metalloprotease domain	PF00099	83%	111	203
			blastx.2	(AB017800) nolp [Homo sapiens]	dbj BAA34576.1	31%	257	322
HTEJP10	914785	1180	HMMER 1.8	PFAM: Heat shock hsp90 proteins	PF00183	14.92	5	52
HTEJP66	916481	1181	blastx.14	(AF151885) CGI-127 protein [Homo sapiens]	gi 4929723 gb AAD34122.1 AF151885_1	73%	2	190
HTEKS20	846714	1210	HMMER 2.1.1	PFAM: EF hand	PF00036	84%	242	319
HTELE10	963563	1221	blastx.14	integumentary mucin B.1 [Xenopus laevis]	gi 1184035 emb CAA64795.1	65%	188	265
HTEJL89	966134	1229	HMMER 1.8	PFAM: Zinc-binding metalloprotease domain	PF00099	2.28	593	637
HTELV86	910946	1252	HMMER	PFAM: Fibronectin type	PF00041	69%	135	299
						53%	290	487
						77%	523	549
						37%	540	629
						13.29	110	214
						100%	499	639
						62%	626	706
						84.7	453	539
						75%	339	244
						2.6	290	316
						77.22	400	669

[illegible]



								42%	134	78
HTEMP49	932319	1280		blastx.14	(AL117564) hypothetical protein [Homo sapiens]	gi 5912114 emb CAB55995.1		58%	43	8
HTEMR65	909280	1281		HMMER 2.1.1	PFAM: Zinc finger, C2H2 type	PF000096		91%	12	629
				blastx.2	zinc finger protein [Homo sapiens]	emb CAA55533.1		51.5	35	103
								61%	2	286
								56%	2	286
								56%	2	286
								54%	2	292
								52%	2	286
								50%	2	304
								53%	2	286
								51%	2	286
								51%	2	286
								53%	5	286
								51%	2	283
								52%	5	286
								51%	2	283
								40%	909	998
								45%	866	931
HTEMT06	934338	1284		blastx.14	120 kDa style glycoprotein [Nicotiana glauca]	gi 2653671 gb AAC15893.1		28%	50	280
								37%	240	383
								32%	80	226
HTEMX92	913795	1288		HMMER 2.1.1	PFAM: BTB/POZ domain	PF00651		62.3	122	319
				blastx.14	(AF086831) leukemia/lymphoma related factor cLRF	gi 3599513 gb AAC35368.1		47%	143	337
								32%	331	450

HTENI58	917213	1299	HMMER 2.1.1 blastx.14	[Gallus gallus] PFAM: HMG (high mobility group) box HMG-X protein [Xenopus laevis]	PF00505 gi 639691 dbj BAA06 440.1	118.2	308	514
HTENP54	787535	1306	HMMER 1.8	PFAM: Bacterial regulatory proteins, luxR family	PF00196	6.37	107	199
HTENP80	775387	1307	HMMER 1.8	PFAM: TPR Domain	PF00515	11.77	83	166
HTENR10	963530	1309	blastx.14	protein kinase related to Raf protein kinases; 1	gi 1171248 gb AAC5 0354.1	82%	10	132
HTENR93	920834	1311	blastx.14	(AF121781) unknown [Homo sapiens]	gi 4210989 gb AAD1 2066.1	79% 74%	285 620	644 808
HTENY35	884043	1319	HMMER 1.8	PFAM: Zinc finger, C3HC4 type (RING finger)	PF00097	6.56	449	592
HTEOF80	847224	1327	HMMER 1.8	PFAM: EGF-like domain	PF00008	14.65	20	100
HTEOI36	870575	1330	HMMER 1.8	PFAM: HMG (high mobility group) box	PF00505	15.44	69	236
HTEON29	815852	1333	HMMER 1.8	PFAM: EF hand	PF00036	22.29	266	349
HTEOV90	870532	1336	HMMER 1.8	PFAM: Core histones H2A, H2B, H3 and H4	PF00125	11.37	358	435
HTEOW39	870566	1338	HMMER 1.8	PFAM: C-type lysozymes and alpha-lactalbumin	PF00062	126.92	59	295

HTEPA08	958391	1340	blastx.14	(AF004430) hD54+ins2 isoform [Homo sapiens]	gi 2895085 gb AAC9 8478.1	47%	225	482
HTEPE28	932576	1347	HMMER 2.1.1	PFAM: metalloproteinase family M24	PF00557	67%	483	575
			blastx.14	(AC002387) putative methionine aminopeptidase [Arabidopsis thaliana]	gi 2583129 gb AAB8 2638.1	203	2	442
HTEPM33	870561	1354	HMMER 2.1.1	PFAM: LIM domain containing proteins	PF00412	68% 51%	2	442 488
HTEPN07	952243	1356	blastx.14	WW domain binding protein-2 [Homo sapiens]	gi 4205086 gb AAD1 0951.1	95.6	4	180
HTEPP30	947107	1359	blastx.14	(AF081947) tektin [Mus musculus]	gi 4235350 gb AAD1 3183.1	54% 42%	174	311
			HMMER 2.1.1	PFAM: Ank repeat	PF00023	73% 21%	9	158
HTEPV02	917406	1366	blastx.14	alt. ankyrin (variant 2.2) [Homo sapiens]	gi 747710 emb CAA3 4611.1	30.4	343	435
HTEPX32	870698	1367	HMMER 1.8	PFAM: Double-stranded RNA binding motif	PF00035	41%	247	411
			blastx.14	(AC004877) sco-spondin-mucin-like; similar to P98167 1 sapiens]	gi 3638957 gb AAC3 6301.1	36	508	699
HTEQD40	915198	1371	blastx.14			30% 33% 43% 45% 54% 42% 25%	278 266 188 506 110 121 260	171 195 141 447 78 65 177
HTEQE87	958354	1373	blastx.14	(AF132972) CGI-38 protein [Homo sapiens]	gi 4680715 gb AAD2 7747.1 AF132972 1	50% 58%	334 149	645 349

HTEQP45	966141	1379	HMMER 1.8	PFAM: HMG (high mobility group) box	PF00505	5.99	7	48
HTEQR15	939641	1381	HMMER 1.8	PFAM: 4 transmembrane segments integral membrane proteins	PF00335	32.9	174	455
			blastx.2	(AF133424) tetraspanin TM4-B [Homo sapiens]	gb AAF08363.1 AF1 33424_1	74%	141	698
HTEQT63	924799	1383	HMMER 1.8	PFAM: Bacterial mufT protein	PF00293	3.53	472	501
HTLCA95	911655	1398	HMMER 2.1.1	PFAM: Actin	PF00022	345.2	170	1096
			blastx.14	actin 2 [Echinococcus granulosus]	gi 290399 gb AAC80 574.1	50% 42% 53% 45% 63%	170 761 677 593 2	568 1096 760 652 34
			HMMER 2.1.1	PFAM: DnaJ domain	PF00226	119.8	245	445
HTLCY54	908832	1402	blastx.14	(AB014888) MRJ [Homo sapiens]	gi 3402485 dbj BAA3 2209.1	67% 78% 47% 40%	239 797 632 611	616 934 694 691
			HMMER 2.1.1	PFAM: Zinc finger, C2H2 type	PF00096	47.6	197	271
HTLDE64	908613	1407	blastx.2	Kruppel-like factor LKLF [Mus musculus]	gb AAA86728.1	61% 42%	179 57	355 176
			HMMER 2.1.1	PFAM: Zinc finger, C2H2 type	PF00096	80.8	51	119
HTLDF33	909254	1409	blastx.2	(AL022067) dJ134E15.1	emb CAB36862.1	70%	12	422

HTLDG55	911645	1410	blastx.14	(Blimp-1) [Homo sapiens] actin [Trypanosoma brucei]	gi 161963 gb AAA30 151.1	38%	24	392
HTLDO94	915223	1413	blastx.14	(AC004667) hypothetical protein [Arabidopsis thaliana]	gi 3668087 gb AAC6 1819.1	37% 34% 37% 44% 30% 38% 29%	96 108 108 40 37 40 43	263 263 242 93 105 93 93
HTLDS55	891322	1416	HMMER 2.1.1 blastx.2	PFAM: Cell division protein (AJ250723) septin-like protein Sint1 [Mus musculus]	PF00735  emb CAB59833.1	454.7  63%	233  131	1069  1054
HTLDT05	909752	1417	HMMER 2.1.1 blastx.2	PFAM: PH domain  (AK000004) FLJ00004 protein [Homo sapiens]	PF00169  dbj BAA92229.1	36.9  77%	59  47	271  487
HTLDU05	911649	1419	HMMER 1.8 blastx.14	PFAM: Actins  (AF113908) actin-related protein [Emmericella nidulans]	PF00022  gi 4731565 gb AAD2 8502.1 AF113908_1	141.45  30% 33%	125  2 451	469  469 540
HTLEH30	934287	1429	blastx.14	(AF025310) tssk-1 and tssk-2 kinase substrate [Mus musculus]	gi 2739052 gb AAC0 3366.1	90% 58% 81%	205 343 306	270 429 338
HTLEJ11	973302	1431	HMMER 2.1.1	PFAM: Eukaryotic protein kinase domain	PF00069	55.9	44	223

HTLET56	911654	1444	blastx.14 HMMER 1.8	(AF144573) Mx- interacting protein kinase PKM [Mesocricetus auratus] PFAM: Actins	gi 4868443 gb AAD3 1319.1 AF144573_1	69% 40% 42% 38%	35 437 293 877	268 592 397 939
HTLET78	836820	1445	HMMER 2.1.1	actin [Filobasidiella neoformans]	gi 508701 gb AAC49 074.1	52% 33% 53% 52%	143 787 721 966	715 963 804 1022
HTLEV95	883332	1448	HMMER 1.8	PFAM: Proprotein convertase P-domain	PF01483	216.9	38	433
HTLEY11	967309	1451	blastx.14	PFAM: Phorbol esters / diacylglycerol binding domain	PF00130	1.97	172	225
HTLFE05	954984	1459	blastx.14	(AC004877) sco-spondin- mucin-like; similar to P98167 1 sapiens]	gi 3638957 gb AAC3 6301.1	66%	267	250
HTLFI39	953730	1462	blastx.2	(AJ007798) nuclear protein SA3 [Homo sapiens]	gi 5834580 emb CAB 55312.1	86% 65%	12 589	731 924
HTLGD25	870136	1465	HMMER 1.8	(AF053356) ORF4 [Homo sapiens]	gb AAC78801.1	100% 100% 100%	77 3 376	256 77 420
HTLGM07	952254	1470	HMMER 2.1.1	PFAM: Ubiquitin family	PF00240	83.86	79	324
			HMMER 2.1.1	PFAM: 'Cold-shock' DNA-binding domain	PF00313	70.2	3	158
			blastx.14	(AF096834) germ cell	gi 4837737 gb AAD3	90%	3	323

HTLGT62	918606	1471	blastx.14	specific Y-box binding protein [Homo sapiens]	0662.1	100%	393	485
						100%	549	614
						100%	711	761
						36%	661	750
						28%	637	720
						34%	117	203
						40%	475	519
						63%	487	519
						48%	187	261
						38%	379	456
HTLGX90	870528	1473	HMMER 2.1.1	a6(IV) collagen [Homo sapiens]	gi 1850097 dbj BAA09791.1	61%	503	541
						40%	113	178
						80%	232	261
						61%	181	219
						53%	229	273
						37%	196	276
						42%	14	70
						66%	181	207
						20.1	637	846
						36.8	,9	95
HTLHC14	908428	1474	HMMER 2.1.1	PFAM: 'Cold-shock' DNA-binding domain	PF00313	88%	3	260
						92%	330	443
						62%	424	528
						100%	539	577
						37%	539	625
			blastx.14	(AF096834) germ cell specific Y-box binding protein [Homo sapiens]	gi 4837737 gb AAD30662.1	34%	397	483
						50%	519	572

HTLHP32	933335	1478	HMMER 1.8	PFAM: RNA recognition motif. (aka RRM, RBD, or RNP domain)	PF00076		70% 28% 23% 34% 37% 30% 30%	584 509 342 54 460 256 402	613 634 479 140 531 363 479
HTLHT15	946586	1481	blastx.14	(AL032626) cDNA EST EMBL:D70654 comes from this 1 1 1 yk377b8.3 comes f	gi 3925211 emb CAA 21539.1		43% 66% 50% 58% 39%	1 287 402 235 240	243 358 455 270 308
HTLHV67	936139	1484	blastx.14	(AF005038) secretory carrier membrane protein [Homo sapiens]	gi 5230678 gb AAB6 2723.2		83% 60% 96% 66%	152 591 465 2	475 749 542 46
HTLHZ10	963475	1486	blastx.14	circumsporozoite protein [Plasmodium vivax]	gi 482882 gb AAC46 499.1		37% 35% 33% 35% 45% 45% 45% 40% 50% 50%	3 3 3 45 128 181 234 128 234 340	137 137 137 137 187 240 293 187 281 387



HTLJD36	945891	1488	blastx.2	(AC004410) fos39554_1 [Homo sapiens]			40%	181	240
							40%	128	187
							40%	128	187
							50%	287	334
							50%	287	334
							40%	234	293
							40%	128	187
							40%	181	240
							50%	234	281
							50%	340	387
							40%	287	346
							50%	128	175
							50%	258	293
							50%	205	240
							50%	311	346
HTLIY52	942161	1495	HMMER 1.8 blastx.2	PFAM: Eukaryotic protein kinase domain serine/threonine kinase [Mus musculus]	gb AAC05601.1		54%	6	275
							71%	292	417
							57%	257	319
							251.19	166	933
HTLJA23	953729	1496	blastx.2	(AF053356) ORF4 [Homo sapiens]	PF00069		44%	133	936
							100%	2	274
							100%	394	438
HTLJC71	922923	1498	HMMER 1.8 blastx.2	PFAM: Src homology domain 3 (AL133030) hypothetical protein [Homo sapiens]	gb AAC78801.1  PF00018		9.14	1152	1340
							94%	3	1355
HTLJD88	953714	1500	blastx.14	(AF025310) tssk-1 and	emb CAB61362.1  gi 2739052 gb AAC0		83%	3	206

HTLJI75	924755	1501	HMMER 2.1.1 blastx.14	tssk-2 kinase substrate [Mus musculus]	3366.1	74% 95% 72% 77% 63% 32% 60%	554 263 516 468 510 260 21	715 391 548 494 542 334 50
				PFAM: Coenzyme A transferase	PF01144	317.7	445	813
				succinyl-CoA:alpha- ketoacid coenzyme A transferase [Sus scrofa]	gi 164423 gb AAA31 019.1	85% 65% 80% 79%	448 37 813 980	813 405 977 1096
HTTBJ94	530564	1515	HMMER 2.1.1	PFAM: Protein of unknown function	PF01871	63.2	18	254
HTTCT34	973210	1521	HMMER 2.1.1 blastx.2	PFAM: Divalent cation transporter (AK000480) unnamed protein product [Homo sapiens]	PF01769  dbj BAA91192.1	46.7  89% 96% 58%	93  466 105 861	251  972 491 1049
HTTDO19	908937	1532	HMMER 2.1.1 blastx.2	PFAM: Zinc finger, C2H2 type zinc finger protein [Homo sapiens]	PF00096  emb CAA55529.1	42.8  76% 72% 45% 67% 44% 67% 50%	22  1 1 1 1 1 1 13	90  129 129 237 129 237 129 234

HTTEU68	967819	1543	blastx.14	glycosyl-phosphatidyl- inositol-anchored protein homolog [Mus musculus]	gi 1098569 gb AAA8 2599.1	63%	125	190
						36%	180	287
						71%	149	190
						90%	161	190
						36%	180	287
						36%	180	287
						57%	180	221
						50%	180	227
HTTFM66	950051	1556	blastx.2	(AK001269) unnamed protein product [Homo sapiens]	dbj BAA91592.1	36%	26	190
						52%	536	649
						32%	197	352
						52%	759	827
						43%	377	424
HTTKP07	911390	1587	HMMER 1.8	PFAM: Src homology domain 3	PF00018	15.82	47	196
			blastx.2	(AL049683) hypothetical protein [Homo sapiens]	emb CAB41255.1	51%	8	289
						56%	292	450
HUKAC72	966804	1594	blastx.14	DARPP-32=DOPAMINE AND CAMP- REGULATED PHOSPHOPROTEIN.	sp G545790 G545790	81%	73	309
HUVCQ07	928053	1612	blastx.14	SHB=SRC HOMOLOG 2 PROTEIN.	sp G545100 G545100	44%	102	251
						52%	6	68
HUVFH03	922064	1639	HMMER 1.8	PFAM: FAD/NAD- binding domain in oxidoreductases	PF00175	6.83	282	323

HUVGZ77	909169	1650	HMMER 2.1.1 blastx.14	PFAM: BTB/POZ domain (AB011665) BAZF [Mus musculus]	PF00651	51.2	110	253
HUVHC93	908555	1653	HMMER 2.1.1 blastx.14	PFAM: KRAB box	gi 3287501 dbj BAA3 1223.1	94%	47	301
			HMMER 2.1.1 blastx.14	ha0946 protein is Kruppel-related. [Homo sapiens]	PF01352	87%	295	366
HVCAZ38	969208	1659	blastx.2	(AK000496) unnamed protein product [Homo sapiens]	gi 498152 dbj BAA06 541.1	152.7	147	335
HVVBK72	933167	1668	HMMER 1.8 blastx.14	PFAM: UDP- glucuronosyl and UDP- glucosyl transferases	dbj BAA91205.1	64%	135	362
HWLHJ68	957834	1671	HMMER 1.8 blastx.14	PFAM: Zinc finger, C2H2 type	PF00201	55%	395	159
HVVBY08	957658	1673	HMMER 2.1.1 blastx.14	(AB012265) wizL [Mus musculus]	PF00096	75%	151	110
			HMMER 2.1.1 blastx.14	PFAM: Sm protein	gi 3551182 dbj BAA3 2790.1	64%	2	391
HUVGP05	930892	1677	blastx.14	(AC005258) R30783_1 [Homo sapiens]	PF01423	6.35	216	278
HUVFI01	945834	1679	blastx.2	(AF091457) zinc finger protein RIN ZF [Rattus norvegicus]	gi 3289993 gb AAC2 5622.1	55%	201	314
			blastx.14	similar to human TRAMP protein. [Homo sapiens]	gi 4557143 gb AAD2 2522.1 AF091457_1	39%	101	169
HUNAF20	961527	1693	blastx.14	(AF184971) cytokine	dbj BAA06540.1	79.4	134	355
					gi 6013325 gb AAF01	97%	185	403
						100%	130	195
						82%	231	398
						100%	217	246
						98%	103	1212
						100%	382	278

HUNAE02	921132	1696		blastx.14	receptor homolog 1 (AF151848) CGI-90 protein. [Homo sapiens] PFAM: Trypsin	320.1 AF184971.1 gi 4929649 gb AAD3 4085.1 AF151848.1 PF00089	100%	2	94
HUKEP18	957456	1710		HMMER 1.8 blastx.2	(AF100707) testes- specific protein TSP50 [Homo sapiens]	gb AAF22500.1 AF1 00707_1	100%	118	588
HUKDG10	968333	1713		blastx.14	F35D2.4 gene product [Caenorhabditis elegans]	gi 861294 gb AAA68 328.1	47%	3	314
HTTJN26	869612	1744		blastx.2	cDNA EST yk338f6.5 comes from this gene; cDNA EST EMBL:D75296 comes from this gene [Caenorhabditis elegans]	emb CAB04553.1	35% 50%	587 666	345 589
HTTIR04	926772	1748		blastx.14	(AF092091) cp431 [Rattus norvegicus]	gi 3851160 gb AAC7 2234.1	45% 26%	462 195	163 118
HTTDM42	460948	1762		HMMER 2.1.1	PFAM: KRAB box	PF01352	79.1	282	401
HTTBP62	932997	1771		blastx.14	(AF036705) Similar to phytoene desaturase; coded for 1 1 1 coded for	gi 2749982 gb AAB9 5172.1	69% 68%	64 373	336 468
HTLHK57	946914	2662		blastx.14	acetylcholine receptor alpha 9 subunit [Rattus rattus]	gi 595481 gb AAA56 720.1	76% 71%	783 586	938 720
HTLHB93	945862	1797		blastx.2	(AJ006692) ultra high sulfur keratin [Homo sapiens]	emb CAA07188.1	40% 39%	21 21	272 272

HTLGS10	963458	1799	blastx.14	pro-alpha-2(I) collagen [Mus musculus]	gi 50489 emb CAA41 205.1	34%	108	212
HTLEQ92	932882	1804	blastx.14	(AL117444) hypothetical protein [Homo sapiens]	gi 5911890 emb CAB 55929.1	100%	6	107
HTLEN77	772363	1806	HMMER 1.8	PFAM: EF hand	PF00036	100%	203	256
HTLDZ81	778180	1810	HMMER 1.8	PFAM: Tubulin	PF00091	36%	213	269
HTLDW27	961353	1811	blastx.14	(AF014461) EXO70 protein [Mus musculus]	gi 2352998 gb AAB6 9345.1	95%	239	601
HTLBH67	751985	1821	HMMER 1.8	PFAM: Src homology domain 3	PF00018	100%	186	236
HTFBE02	920507	1830	HMMER 2.1.1	PFAM: Isopentenyl- diphosphate delta- isomerase	PF01772	88%	76	126
HTEQN83	908528	1834	HMMER 2.1.1	PFAM: KRAB box	PF01352	76%	1	51
			blastx.14	(AL080125) hypothetical protein [Homo sapiens]	gi 5262560 emb CAB 45723.1	63%	36	68
HTEPE35	948475	1838	HMMER 2.1.1	PFAM: Phosphatidylinositol- specific phospholipase C, Y domain	PF00387	37.78	16	162
						95.6	103	291
						98.7	81	203
						62%	75	251
						66%	39	74
						163.8	839	507

HTEOY82	948845	1839	blastx.2	1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase 1 (AJ010949) calcium channel alpha-2-delta-C subunit [Mus musculus]	gi 4186073 emb CAA09423.1	pir S14113 S14113	48%	1	750
HTEMV66	813038	1852	HMMER 2.1.1	PFAM: Eukaryotic protein kinase domain	PF000069		27.8	154	315
HTEMU66	944419	1853	HMMER 1.8	PFAM: Eukaryotic protein kinase domain	PF000069		114.85	613	963
			blastx.2	MEK Kinase 3 [Mus musculus]	gb AAB03535.1		49%	604	948
							29%	209	340
HTEMO58	964769	1855	blastx.14	casein kinase 1 gamma 1 isoform [Rattus norvegicus]	gi 854733 gb AAC52200.1		82%	395	195
							65%	482	423
							87%	424	401
							77%	214	188
HTEKH17	942526	1867	blastx.2	(AF016184) putative pheromone receptor [Rattus norvegicus]	gb AAC53331.1		70%	300	88
							53%	602	378
							52%	85	29
HTEGJ74	765901	1892	HMMER 2.1.1	PFAM: Tudor domain	PF00567		38.5	6	167
HTEDH90	909165	1924	HMMER 2.1.1	PFAM: BTB/POZ domain	PF00651		38.1	195	308
			blastx.14	(AF097916) HIV-1 inducer of short transcripts binding protein [Homo sapiens]	gi 3860089 gb AAC72973.1		45%	150	308
							39%	348	416
HTEDH42	615250	1926	HMMER 2.1.1	PFAM: ADP-ribosylation factor family	PF00025		156.4	42	353

HTEDF22	908406	1935	HMMER 1.8 blastx.2	PFAM: Zinc finger, CCHC class	PF00098	20.37	250	297
				nucleic acid binding protein [Mus sp.]	gb AAA89198.1	46%	52	303
HTECC09	678659	1952	HMMER 1.8	PFAM: Zinc finger, C3HC4 type (RING finger)	PF00097	14.18	261	338
			blastx.2	(AF151048) HSPC214 [Homo sapiens]	gb AAF36134.1 AF1 51048.1	85%	111	332
HPWTA06	936026	1982	blastx.14	Collagenase precursor (EC 3.4.-.-) [Escherichia coli]	gi 1742347 dbj BAA1 5068.1	100%	624	454
						100%	359	207
						100%	457	362
						58%	216	115
						64%	169	86
HPWSA52	727294	1983	HMMER 1.8	PFAM: Homeobox domain	PF00046	11.67	215	262
HPWAJ39	575271	1993	HMMER 1.8	PFAM: Phorbol esters / diacylglycerol binding domain	PF00130	2.68	81	122
HPRAG45	939849	2672	HMMER 1.8	PFAM: WD domain, G- beta repeats	PF00400	21.65	135	212
HPMGR15	660374	2040	HMMER 1.8	PFAM: Phorbol esters / diacylglycerol binding domain	PF00130	2.84	307	333
HPLAI10	968707	2074	blastx.14	AT motif-binding factor [Mus musculus]	gi 1345408 dbj BAA0 5046.1	33%	443	496
HPJEV95	929723	2076	HMMER 1.8	PFAM: ATP synthase A chain	PF00119	20.61	169	393
HPJDT03	922815	2083	HMMER	PFAM: WW/rsp5/WWP	PF00397	9.71	294	371



				1.8	domain containing proteins				
HPJDA25	951281	2087		blastx.2	(AF047690) ATP-binding cassette protein M-ABC1 [Homo sapiens]	gb AAD15748.1	73%	291	488
HPJDA25	951284	2676		blastx.14	(AF047690) ATP-binding cassette protein M-ABC1 [Homo sapiens]	gi 4321407 gb AAD15748.1	87%	219	97
HPJQA70	973604	2130		HMMER 1.8	PFAM: Flagella basal body rod proteins	PF00460	41.51	206	298
				blastx.14	Flagellar hook-associated protein 1 (hap1) . [Escherichia coli]	gi 1651528 dbj BAA35891.1	77% 100%	322 194	498 322
HPCTD03	922149	2191		HMMER 2.1.1	PFAM: Pterin 4 alpha carbinolamine dehydratase	PF01329	143.1	6	305
				blastx.14	pterin-4a-carbinolamine dehydratase [Homo sapiens]	gi 848985 gb AAA69662.1	62%	18	311
HPCOV68	911075	2195		blastx.14	(AC004500) GDF-9 [Homo sapiens]	gi 2996640 gb AAC08450.1	64%	2	160
HPCAO89	946913	2196		HMMER 1.8	PFAM: Serpins (serine protease inhibitors)	PF00079	53.12	94	309
				blastx.2	leupin [Homo sapiens]	emb CAA61420.1	39% 45%	82 309	327 452
HOVEE20	909030	2207		HMMER 2.1.1	PFAM: KRAB box	PF01352	105.4	229	348
				blastx.14	zinc finger protein 30 [Mus musculus]	gi 456269 emb CAA82913.1	67% 33%	193 367	348 429

HOVCO50	932544	2211	HMMER 1.8 blastx.14	domesticus] PFAM: Zinc-binding metalloprotease domain (AF072860) protein activator of the 1	PF00099	2.22	464	508
HOOKF04	925784	2244	blastx.14	(AF092091) cp431 [Rattus norvegicus]	gi 3290198 gb AAC2 5672.1	82% 43%	458 204	577 251
HOOJN04	925783	2246	blastx.14	(AF011336) putative E1- E2 ATPase [Mus musculus]	gi 3851160 gb AAC7 2234.1	94% 94% 29% 27%	2 158 5 5	157 265 127 115
HONAD02	859016	2261	HMMER 2.1.1	PFAM: Polyprenyl synthetases	gi 2944187 gb AAC0 5245.1	100%	4	153
HOGAM56	908904	2276	blastx.14	ZINC FINGER [CLONE ZNF78L1].	PF00348	38.5	753	905
HOFNW65	815822	2286	HMMER 2.1.1	PFAM: Calpain family cysteine protease	sp G299838 G299838	63% 68% 56% 50% 46%	6 3 33 188 191	179 152 176 235 235
HOFNW07	953436	2288	HMMER 2.1.1 blastx.14	PFAM: Cytochrome c/c1 heme lyase	PF01265	21.1	259	354
HOFNI10	964682	2301	blastx.14	holocytochrome c-type synthetase [Homo sapiens] similar to Human zinc- finger protein, BR140(P1:JC2069)	gi 1209635 gb AAB1 9007.1	71% 83%	190 139	360 192
					gi 1504012 dbj BAA1 3205.1	100% 90% 100%	150 64 271	269 153 291

HOFNC80	835718	2303	HMMER 1.8	[Homo sapiens] PFAM: IG (immunoglobulin) superfamily	PF00047	66%	293	319
			blastx	(AF111714) junctional adhesion molecule [Bos taurus]	gb AAD42051.1 AF1 11714_1	71% 94% 33%	28 306 306	303 362 359
HOFMT55	888552	2311	HMMER 2.1.1	PFAM: Caspase recruitment domain	PF00619	43	111	239
HOFMS43	947973	2313	HMMER 2.1.1	PFAM: Sushi domain (SCR repeat)	PF00084	64	174	302
			blastx.2	porcine membrane cofactor protein [Sus scrofa]	dbj BAA20476.1	47%	12	317
HOFMP09	943358	2315	HMMER 2.1.1	PFAM: Immunoglobulin domain	PF00047	27.5	34	144
			blastx	B-CAM [Homo sapiens]	emb CAA56327.1	76% 49% 85% 33% 46% 43%	31 300 473 247 283 91	351 494 553 372 327 138
HOFMF82	693987	2317	HMMER 1.8	PFAM: Zinc finger, C2H2 type	PF00096	10.91	44	106
HOFMF82	694062	2688	HMMER 2.1.1	PFAM: Zinc finger, C2H2 type	PF00096	53.7	372	440
HOFMF82	909248	2689	HMMER 2.1.1	PFAM: Zinc finger, C2H2 type	PF00096	48.3	61	129
			blastx.14	zinc finger protein [Homo]	gi 495568 gb AAC50	52%	19	429

HOF25	942367	2320	blastx.2	sapiens]	264.1]	50%	55	429
				(AF036696) contains similarity to Brassica oleracea non-green 1 (GB:U13632) [Caenorhabditis elegans]	gb AAB88349.1	39%	289	969
HODFF88	974911	2341	HMMER 1.8	PFAM: Eukaryotic protein kinase domain	PF00069	101.43	98	370
			blastx.14	mixed-lineage protein kinase 1 - human	pir S32467 JU0229	74%	131	493
						81%	763	921
						30%	751	915
HODFD73	909812	2343	HMMER 2.1.1	PFAM: GTPase-activator protein for Ras-like GTPase	PF00616	34	190	390
			blastx.14	(AB016962) synGAP-b1 [Rattus norvegicus]	gi 4417207 dbj BAA74972.1	98%	4	480
HODCZ64	745966	2357	blastx.2	elastin like protein [Drosophila melanogaster]	emb CAA59990.1	75%	3	86
						42%	364	405
						42%	358	399
HODAK55	745532	2383	HMMER 1.8	PFAM: ATPases associated with various cellular activities (AAA)	PF00004	60.69	11	157
HOCPH02	917453	2400	HMMER 1.8	PFAM: Zinc finger, C3HC4 type (RING finger)	PF00097	8.27	265	309
HNIAB26	974750	2412	blastx.14	PR-1-like protein	gi 166861 gb AAA32	37%	388	143

HLWFB01	915399	2419	blastx.14	[Arabidopsis thaliana] (AL117637) hypothetical protein [Homo sapiens]	863.1] gi 5912226 emb CAB 56026.1	94%	155	328
HLWBC21	869611	2443	HMMER 1.8	PFAM: Src homology domain 3	PF00018	3.29	350	379
HLWBA27	931387	2445	blastx.14	(AF070657) glutathione S-transferase subunit 13 homolog [Homo sapiens]	gi 4454690 gb AAD2 0963.1	93% 75% 100%	89 486 277	286 533 306
HLWAW86	941397	2692	HMMER 1.8	PFAM: Integrins alpha chain	PF00357	163.29	115	459
HLWAR08	959139	2448	HMMER 1.8	PFAM: Ank repeat	PF00023	13.97	3	44
HLWAL31	971312	2693	HMMER 2.1.1 blastx.2	PFAM: Leucine rich repeat C-terminal domain (AF133270) SLIT2 [Homo sapiens]	PF01463  gb AAD25539.1 AF1 33270_1	51.7  89% 37% 35% 30% 72% 57%	317  77 77 92 92 495 493	466  565 481 505 553 524 534
HJMAU07	961623	2466	blastx.14	(AB016088) RNA binding protein [Homo sapiens]	gi 5821145 dbj BAA8 3714.1	75%	321	1
HETLF29	909762	2471	HMMER 1.8 blastx.14	PFAM: Eukaryotic protein kinase domain similar to cAMP- dependant protein kinase; cDNA EST 111	PF00069  gi 3878636 emb CAA 88953.1	143.18  56%	6  6	416  416
HETBE61	965638	2483	blastx.14	(AF151833) CGI-75 protein [Homo sapiens]	gi 4929619 gb AAD3 4070.1 AF151833_1	88% 77%	347 247	526 339

HEQCC01	924849	2488		blastx.14	(AF151878) CGI-120 protein [Homo sapiens]	gi 4929709 gb AAD34115.1 AF151878_1	93%	318	365
HEQBG85	827915	2492		HMMER 1.8	PFAM: Peroxidases	PF00141	81%	215	262
HEQAD73	914044	2500		blastx.14	(AL023286) hypothetical protein [Schizosaccharomyces pombe]	gi 3116115 emb CAA18866.1	73%	892	422
HEPCB04	941270	2502		blastx.14	(AF153605) androgen induced protein [Homo sapiens]	gi 5231135 gb AAD41087.1 AF153605_1	69%	343	266
HEPAJ04	933091	2513		blastx.14	(AL034368) predicted using hexExon; L779.3, 1	gi 4760337 emb CAB39078.2	24.44	13	162
HEGBC03	922550	2516		blastx.14	similar to collagen [Caenorhabditis elegans]	gi 3873667 emb CAA94874.1	38%	319	444
HEEAX09	912065	2525		HMMER 1.8	PFAM: lipocalins	PF00061	39%	463	546
HEEAG51	930810	2533		blastx.14	epididymal secretory protein I (ESP I) [Rattus norvegicus]	gi 56117 emb CAA42493.1	70%	203	232
HCOMM05	925952	2554		HMMER 1.8	(AF083108) sirtuin type 3 [Homo sapiens]	gi 525322 gb AAD40851.1 AF083108_1	97%	524	387
					PFAM: Src homology domain 3	PF00018			
							59.48	178	342

HCHOX63	957690	2556	blastx.2	epidermal growth factor receptor kinase substrate [Homo sapiens]	gb AAA62280.1	46%	445	840
			blastx.14	CDC42 GTPase- activating protein [Homo sapiens]	gi 409027 gb AAA16 142.1	43%	115	435
						23%	43	222
HCHNW48	862478	2557	HMMER 1.8	PFAM: Laminin B (Domain IV)	PF00052	64%	112	597
						78%	661	702
HCHMW18	966985	2559	blastx.14	(AB017614) OASIS protein [Mus musculus]	gi 4519621 dbj BAA7 5670.1	100%	538	386
						68%	440	222
						39%	308	240
HCHMI15	935298	2562	blastx.14	PSD-95/SAP90-associated protein-4 [Rattus norvegicus]	gi 1864093 gb AAB4 8590.1	52%	181	582
						75%	682	825
						91%	584	691
						50%	620	667
HCHAI62	743411	2570	HMMER 1.8	PFAM: Core histones H2A, H2B, H3 and H4	PF00125	8.45	2	76
HCDMC22	672815	2578	HMMER 1.8	PFAM: Core histones H2A, H2B, H3 and H4	PF00125	9.49	182	241
HBGTT76	903653	2619	HMMER 2.1.1	PFAM: Ank repeat	PF00023	62.3	197	295
			blastx.14	(AJ133120) Proline rich synapse associated protein 2 [Rattus norvegicus]	gi 5262748 emb CAB 45688.1	72%	131	556
						47%	499	561
HBGMT82	954374	2624	blastx.14	(AJ004801) very large virion protein (tegument) [Bovine herpesvirus type 1.1]	gi 2653311 emb CAA 06097.1	37%	187	267
						35%	91	201
						32%	91	201
HBGDF39	861602	2631	HMMER	PFAM: Response	PF00072	44.82	158	355

			1.8	regulator receiver domain			
HBCPV80	932817	2639	HMNER 2.1.1	PFAM: WW domain	PF00397	64.2	71
HAQCD07	958959	2649	blastx.14	(AC005581) R31237_1, partial CDS [Homo sapiens]	gi 3510234 gb AAC3 3487.1	100%	1
							108



[075] Table 2 further characterizes certain encoded polypeptides of the invention, by providing the results of comparisons to protein and protein family databases. The first column provides a unique clone identifier, "Clone ID NO:", corresponding to a cDNA clone disclosed in Table 1A. The second column provides the unique contig identifier, "Contig ID:" which allows correlation with the information in Table 1A. The third column provides the sequence identifier, "SEQ ID NO:X", for the contig polynucleotide sequences. The fourth column provides the analysis method by which the homology/identity disclosed in the row was determined. The fifth column provides a description of PFam/NR hits having significant matches identified by each analysis. Column six provides the accession number of the PFam/NR hit disclosed in the fifth column. Column seven, "Score/Percent Identity", provides a quality score or the percent identity, of the hit disclosed in column five. Comparisons were made between polypeptides encoded by polynucleotides of the invention and a non-redundant protein database (herein referred to as "NR"), or a database of protein families (herein referred to as "PFam"), as described below.

[076] The NR database, which comprises the NBRF PIR database, the NCBI GenPept database, and the SIB SwissProt and TrEMBL databases, was made non-redundant using the computer program nrdb2 (Warren Gish, Washington University in Saint Louis). Each of the polynucleotides shown in Table 1A, column 3 (e.g., SEQ ID NO:X or the 'Query' sequence) was used to search against the NR database. The computer program BLASTX was used to compare a 6-frame translation of the Query sequence to the NR database (for information about the BLASTX algorithm please see Altshul et al., J. Mol. Biol. 215:403-410 (1990), and Gish et al., Nat. Genet. 3:266-272 (1993)). A description of the sequence that is most similar to the Query sequence (the highest scoring 'Subject') is shown in column five of Table 2 and the database accession number for that sequence is provided in column six. The highest scoring 'Subject' is reported in Table 2 if (a) the estimated probability that the match occurred by chance alone is less than  $1.0e-07$ , and (b) the match was not to a known repetitive element. BLASTX returns alignments of short polypeptide segments of the Query and Subject sequences which share a high degree of similarity; these segments are known as High-Scoring Segment Pairs or HSPs. Table 2 reports the degree of similarity

between the Query and the Subject for each HSP as a percent identity in Column 7. The percent identity is determined by dividing the number of exact matches between the two aligned sequences in the HSP, dividing by the number of Query amino acids in the HSP and multiplying by 100. The polynucleotides of SEQ ID NO:X which encode the polypeptide sequence that generates an HSP are delineated by columns 8 and 9 of Table 2.

[077] The PFam database, PFam version 5.2, (Sonnhammer et al., Nucl. Acids Res., 26:320-322, (1998)) consists of a series of multiple sequence alignments; one alignment for each protein family. Each multiple sequence alignment is converted into a probability model called a Hidden Markov Model, or HMM, that represents the position-specific variation among the sequences that make up the multiple sequence alignment (see, e.g., R. Durbin et al., *Biological sequence analysis: probabilistic models of proteins and nucleic acids*, Cambridge University Press, 1998 for the theory of HMMs). The program HMMER version 1.8 (Sean Eddy, Washington University in Saint Louis) was used to compare the predicted protein sequence for each Query sequence (SEQ ID NO:Y in Table 1A) to each of the HMMs derived from PFam version 5.2. A HMM derived from PFam version 5.2 was said to be a significant match to a polypeptide of the invention if the score returned by HMMER 1.8 was greater than 0.8 times the HMMER 1.8 score obtained with the most distantly related known member of that protein family. The description of the PFam family which shares a significant match with a polypeptide of the invention is listed in column 5 of Table 2, and the database accession number of the PFam hit is provided in column 6. Column 7 provides the score returned by HMMER version 1.8 for the alignment. Columns 8 and 9 delineate the polynucleotides of SEQ ID NO:X which encode the polypeptide sequence which shows a significant match to a PFam protein family.

[078] As mentioned, columns 8 and 9 in Table 2, "NT From" and "NT To", delineate the polynucleotides of "SEQ ID NO:X" that encode a polypeptide having a significant match to the PFam/NR database as disclosed in the fifth column of Table 2. In one embodiment, the invention provides a protein comprising, or alternatively consisting of, a polypeptide encoded by the polynucleotides of SEQ ID NO:X delineated in columns 8 and 9 of Table 2. Also provided are polynucleotides encoding such proteins, and the complementary strand thereto.

[079] The nucleotide sequence SEQ ID NO:X and the translated SEQ ID NO:Y are sufficiently accurate and otherwise suitable for a variety of uses well known in the art and described further below. For instance, the nucleotide sequences of SEQ ID NO:X are useful for designing nucleic acid hybridization probes that will detect nucleic acid sequences contained in SEQ ID NO:X or the cDNA contained in Clone ID NO:Z. These probes will also hybridize to nucleic acid molecules in biological samples, thereby enabling immediate applications in chromosome mapping, linkage analysis, tissue identification and/or typing, and a variety of forensic and diagnostic methods of the invention. Similarly, polypeptides identified from SEQ ID NO:Y may be used to generate antibodies which bind specifically to these polypeptides, or fragments thereof, and/or to the polypeptides encoded by the cDNA clones identified in, for example, Table 1A.

[080] Nevertheless, DNA sequences generated by sequencing reactions can contain sequencing errors. The errors exist as misidentified nucleotides, or as insertions or deletions of nucleotides in the generated DNA sequence. The erroneously inserted or deleted nucleotides cause frame shifts in the reading frames of the predicted amino acid sequence. In these cases, the predicted amino acid sequence diverges from the actual amino acid sequence, even though the generated DNA sequence may be greater than 99.9% identical to the actual DNA sequence (for example, one base insertion or deletion in an open reading frame of over 1000 bases).

[081] Accordingly, for those applications requiring precision in the nucleotide sequence or the amino acid sequence, the present invention provides not only the generated nucleotide sequence identified as SEQ ID NO:X, and a predicted translated amino acid sequence identified as SEQ ID NO:Y, but also a sample of plasmid DNA containing cDNA Clone ID NO:Z (deposited with the ATCC on October 5, 2000, and receiving ATCC designation numbers PTA 2574 and PTA 2575; deposited with the ATCC on January 5, 2001, having the depositor reference numbers TS-1, TS-2, AC-1, and AC-2; and/or as set forth, for example, in Table 1A, 6 and 7). The nucleotide sequence of each deposited clone can readily be determined by sequencing the deposited clone in accordance with known methods. Further, techniques known in the art can be used to verify the nucleotide sequences of SEQ ID NO:X.

[082] The predicted amino acid sequence can then be verified from such deposits. Moreover, the amino acid sequence of the protein encoded by a particular clone can also be directly determined by peptide sequencing or by expressing the protein in a suitable host cell containing the deposited human cDNA, collecting the protein, and determining its sequence.

***RACE Protocol For Recovery of Full-Length Genes***

[083] Partial cDNA clones can be made full-length by utilizing the rapid amplification of cDNA ends (RACE) procedure described in Frohman, M.A., et al., Proc. Nat'l. Acad. Sci. USA, 85:8998-9002 (1988). A cDNA clone missing either the 5' or 3' end can be reconstructed to include the absent base pairs extending to the translational start or stop codon, respectively. In some cases, cDNAs are missing the start codon of translation. The following briefly describes a modification of this original 5' RACE procedure. Poly A<sup>+</sup> or total RNA is reverse transcribed with Superscript II (Gibco/BRL) and an antisense or complementary primer specific to the cDNA sequence. The primer is removed from the reaction with a Microcon Concentrator (Amicon). The first-strand cDNA is then tailed with dATP and terminal deoxynucleotide transferase (Gibco/BRL). Thus, an anchor sequence is produced which is needed for PCR amplification. The second strand is synthesized from the dA-tail in PCR buffer, Taq DNA polymerase (Perkin-Elmer Cetus), an oligo-dT primer containing three adjacent restriction sites (XhoI, SalI and ClaI) at the 5' end and a primer containing just these restriction sites. This double-stranded cDNA is PCR amplified for 40 cycles with the same primers as well as a nested cDNA-specific antisense primer. The PCR products are size-separated on an ethidium bromide-agarose gel and the region of gel containing cDNA products the predicted size of missing protein-coding DNA is removed. cDNA is purified from the agarose with the Magic PCR Prep kit (Promega), restriction digested with XhoI or SalI, and ligated to a plasmid such as pBluescript SKII (Stratagene) at XhoI and EcoRV sites. This DNA is transformed into bacteria and the plasmid clones sequenced to identify the correct protein-coding inserts. Correct 5' ends are confirmed by comparing this sequence with the putatively identified homologue and overlap with the partial cDNA clone. Similar

methods known in the art and/or commercial kits are used to amplify and recover 3' ends.

[084] Several quality-controlled kits are commercially available for purchase. Similar reagents and methods to those above are supplied in kit form from Gibco/BRL for both 5' and 3' RACE for recovery of full length genes. A second kit is available from Clontech which is a modification of a related technique, SLIC (single-stranded ligation to single-stranded cDNA), developed by Dumas et al., *Nucleic Acids Res.*, 19:5227-32 (1991). The major differences in procedure are that the RNA is alkaline hydrolyzed after reverse transcription and RNA ligase is used to join a restriction site-containing anchor primer to the first-strand cDNA. This obviates the necessity for the dA-tailing reaction which results in a polyT stretch that is difficult to sequence past.

[085] An alternative to generating 5' or 3' cDNA from RNA is to use cDNA library double-stranded DNA. An asymmetric PCR-amplified antisense cDNA strand is synthesized with an antisense cDNA-specific primer and a plasmid-anchored primer. These primers are removed and a symmetric PCR reaction is performed with a nested cDNA-specific antisense primer and the plasmid-anchored primer.

***RNA Ligase Protocol For Generating The 5' or 3' End Sequences To Obtain Full Length Genes***

[086] Once a gene of interest is identified, several methods are available for the identification of the 5' or 3' portions of the gene which may not be present in the original cDNA plasmid. These methods include, but are not limited to, filter probing, clone enrichment using specific probes and protocols similar and identical to 5' and 3' RACE. While the full length gene may be present in the library and can be identified by probing, a useful method for generating the 5' or 3' end is to use the existing sequence information from the original cDNA to generate the missing information. A method similar to 5' RACE is available for generating the missing 5' end of a desired full-length gene. (This method was published by Fromont-Racine et al., *Nucleic Acids Res.*, 21(7):1683-1684 (1993)). Briefly, a specific RNA oligonucleotide is ligated to the 5' ends of a population of RNA presumably containing full-length gene RNA transcript. A primer set containing a primer specific to the ligated RNA oligonucleotide and a primer specific to a known sequence of the gene of interest, is

used to PCR amplify the 5' portion of the desired full length gene which may then be sequenced and used to generate the full length gene. This method starts with total RNA isolated from the desired source, poly A RNA may be used but is not a prerequisite for this procedure. The RNA preparation may then be treated with phosphatase if necessary to eliminate 5' phosphate groups on degraded or damaged RNA which may interfere with the later RNA ligase step. The phosphatase, if used, is then inactivated and the RNA is treated with tobacco acid pyrophosphatase in order to remove the cap structure present at the 5' ends of messenger RNAs. This reaction leaves a 5' phosphate group at the 5' end of the cap cleaved RNA which can then be ligated to an RNA oligonucleotide using T4 RNA ligase. This modified RNA preparation can then be used as a template for first strand cDNA synthesis using a gene specific oligonucleotide. The first strand synthesis reaction can then be used as a template for PCR amplification of the desired 5' end using a primer specific to the ligated RNA oligonucleotide and a primer specific to the known sequence of the reproductive system antigen of interest. The resultant product is then sequenced and analyzed to confirm that the 5' end sequence belongs to the relevant reproductive system antigen.

[087] The present invention also relates to vectors or plasmids, which include such DNA sequences, as well as the use of the DNA sequences. The material deposited with the ATCC (deposited with the ATCC on October 5, 2000, and receiving ATCC designation numbers PTA 2574 and PTA 2575; deposited with the ATCC on January 5, 2001, having the depositor reference numbers TS-1, TS-2, AC-1, and AC-2; and/or as set forth, for example, in Table 1A, 6 and 7) is a mixture of cDNA clones derived from a variety of human tissue and cloned in either a plasmid vector or a phage vector, as shown, for example, in Table 7. These deposits are referred to as "the deposits" herein. The tissues from which some of the clones were derived are listed in Table 7, and the vector in which the corresponding cDNA is contained is also indicated in Table 7. The deposited material includes cDNA clones corresponding to SEQ ID NO:X described, for example, in Table 1A (Clone ID NO:Z). A clone which is isolatable from the ATCC Deposits by use of a sequence listed as SEQ ID NO:X, may include the entire coding region of a human gene or in other cases such clone may include a substantial portion of the coding region of a human gene. Furthermore,

although the sequence listing may in some instances list only a portion of the DNA sequence in a clone included in the ATCC Deposits, it is well within the ability of one skilled in the art to sequence the DNA included in a clone contained in the ATCC Deposits by use of a sequence (or portion thereof) described in, for example Tables 1A or 2 by procedures hereinafter further described, and others apparent to those skilled in the art.

[088] Also provided in Table 7 is the name of the vector which contains the cDNA clone. Each vector is routinely used in the art. The following additional information is provided for convenience.

[089] Vectors Lambda Zap (U.S. Patent Nos. 5,128,256 and 5,286,636), Uni-Zap XR (U.S. Patent Nos. 5,128,256 and 5,286,636), Zap Express (U.S. Patent Nos. 5,128,256 and 5,286,636), pBluescript (pBS) (Short, J. M. et al., *Nucleic Acids Res.* 16:7583-7600 (1988); Altling-Mees, M. A. and Short, J. M., *Nucleic Acids Res.* 17:9494 (1989)) and pBK (Altling-Mees, M. A. et al., *Strategies* 5:58-61 (1992)) are commercially available from Stratagene Cloning Systems, Inc., 11011 N. Torrey Pines Road, La Jolla, CA, 92037. pBS contains an ampicillin resistance gene and pBK contains a neomycin resistance gene. Phagemid pBS may be excised from the Lambda Zap and Uni-Zap XR vectors, and phagemid pBK may be excised from the Zap Express vector. Both phagemids may be transformed into *E. coli* strain XL-1 Blue, also available from Stratagene.

[090] Vectors pSport1, pCMVSPORT 1.0, pCMVSPORT 2.0 and pCMVSPORT 3.0, were obtained from Life Technologies, Inc., P. O. Box 6009, Gaithersburg, MD 20897. All Sport vectors contain an ampicillin resistance gene and may be transformed into *E. coli* strain DH10B, also available from Life Technologies. See, for instance, Gruber, C. E., et al., *Focus* 15:59- (1993). Vector lacmid BA (Bento Soares, Columbia University, New York, NY) contains an ampicillin resistance gene and can be transformed into *E. coli* strain XL-1 Blue. Vector pCR<sup>®</sup>2.1, which is available from Invitrogen, 1600 Faraday Avenue, Carlsbad, CA 92008, contains an ampicillin resistance gene and may be transformed into *E. coli* strain DH10B, available from Life Technologies. See, for instance, Clark, J. M., *Nuc. Acids Res.* 16:9677-9686 (1988) and Mead, D. et al., *Bio/Technology* 9: (1991).

- [091] The present invention also relates to the genes corresponding to SEQ ID NO:X, SEQ ID NO:Y, and/or the deposited clone (Clone ID NO:Z). The corresponding gene can be isolated in accordance with known methods using the sequence information disclosed herein. Such methods include preparing probes or primers from the disclosed sequence and identifying or amplifying the corresponding gene from appropriate sources of genomic material.
- [092] Also provided in the present invention are allelic variants, orthologs, and/or species homologs. Procedures known in the art can be used to obtain full-length genes, allelic variants, splice variants, full-length coding portions, orthologs, and/or species homologs of reproductive system associated genes corresponding to SEQ ID NO:X or the complement thereof, polypeptides encoded by SEQ ID NO:X or the complement thereof, and/or the cDNA contained in Clone ID NO:Z, using information from the sequences disclosed herein or the clones deposited with the ATCC. For example, allelic variants and/or species homologs may be isolated and identified by making suitable probes or primers from the sequences provided herein and screening a suitable nucleic acid source for allelic variants and/or the desired homologue.
- [093] The polypeptides of the invention can be prepared in any suitable manner. Such polypeptides include isolated naturally occurring polypeptides, recombinantly produced polypeptides, synthetically produced polypeptides, or polypeptides produced by a combination of these methods. Means for preparing such polypeptides are well understood in the art.
- [094] The polypeptides may be in the form of the secreted protein, including the mature form, or may be a part of a larger protein, such as a fusion protein (see below). It is often advantageous to include an additional amino acid sequence which contains secretory or leader sequences, pro-sequences, sequences which aid in purification, such as multiple histidine residues, or an additional sequence for stability during recombinant production.
- [095] The polypeptides of the present invention are preferably provided in an isolated form, and preferably are substantially purified. A recombinantly produced version of a polypeptide, including the secreted polypeptide, can be substantially purified using techniques described herein or otherwise known in the art, such as, for example, by the one-step method described in Smith and Johnson, *Gene* 67:31-40 (1988).



Polypeptides of the invention also can be purified from natural, synthetic or recombinant sources using techniques described herein or otherwise known in the art, such as, for example, antibodies of the invention raised against the reproductive system polypeptides of the present invention in methods which are well known in the art.

[096] The present invention provides a polynucleotide comprising, or alternatively consisting of, the nucleic acid sequence of SEQ ID NO:X, and/or the cDNA sequence contained in Clone ID NO:Z. The present invention also provides a polypeptide comprising, or alternatively, consisting of, the polypeptide sequence of SEQ ID NO:Y, a polypeptide encoded by SEQ ID NO:X or a complement thereof, a polypeptide encoded by the cDNA contained in Clone ID NO:Z, and/or the polypeptide sequence encoded by a nucleotide sequence in SEQ ID NO:B as defined in column 6 of Table 1B. Polynucleotides encoding a polypeptide comprising, or alternatively consisting of, the polypeptide sequence of SEQ ID NO:Y, a polypeptide encoded by SEQ ID NO:X, a polypeptide encoded by the cDNA contained in Clone ID NO:Z and/or a polypeptide sequence encoded by a nucleotide sequence in SEQ ID NO:B as defined in column 6 of Table 1B are also encompassed by the invention. The present invention further encompasses a polynucleotide comprising, or alternatively consisting of, the complement of the nucleic acid sequence of SEQ ID NO:X, a nucleic acid sequence encoding a polypeptide encoded by the complement of the nucleic acid sequence of SEQ ID NO:X, and/or the cDNA contained in Clone ID NO:Z.

[097] Moreover, representative examples of polynucleotides of the invention comprise, or alternatively consist of, one, two, three, four, five, six, seven, eight, nine, ten, or more of the sequences delineated in Table 1B column 6, or any combination thereof. Additional, representative examples of polynucleotides of the invention comprise, or alternatively consist of, one, two, three, four, five, six, seven, eight, nine, ten, or more of the complementary strand(s) of the sequences delineated in Table 1B column 6, or any combination thereof. In further embodiments, the above-described polynucleotides of the invention comprise, or alternatively consist of, sequences delineated in Table 1B, column 6, and have a nucleic acid sequence which is different from that of the BAC fragment having the sequence disclosed in SEQ ID NO:B (see Table 1B, column 5). In additional embodiments, the above-described polynucleotides

of the invention comprise, or alternatively consist of, sequences delineated in Table 1B, column 6, and have a nucleic acid sequence which is different from that published for the BAC clone identified as BAC ID NO:A (see Table 1B, column 4). In additional embodiments, the above-described polynucleotides of the invention comprise, or alternatively consist of, sequences delineated in Table 1B, column 6, and have a nucleic acid sequence which is different from that contained in the BAC clone identified as BAC ID NO:A (see Table 1B, column 4). Polypeptides encoded by these polynucleotides, other polynucleotides that encode these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention. Additionally, fragments and variants of the above-described polynucleotides and polypeptides are also encompassed by the invention.

[098] Further, representative examples of polynucleotides of the invention comprise, or alternatively consist of, one, two, three, four, five, six, seven, eight, nine, ten, or more of the sequences delineated in column 6 of Table 1B which correspond to the same Clone ID NO:Z (see Table 1B, column 1), or any combination thereof. Additional, representative examples of polynucleotides of the invention comprise, or alternatively consist of, one, two, three, four, five, six, seven, eight, nine, ten, or more of the complementary strand(s) of the sequences delineated in column 6 of Table 1B which correspond to the same Clone ID NO:Z (see Table 1B, column 1), or any combination thereof. In further embodiments, the above-described polynucleotides of the invention comprise, or alternatively consist of, sequences delineated in column 6 of Table 1B which correspond to the same Clone ID NO:Z (see Table 1B, column 1) and have a nucleic acid sequence which is different from that of the BAC fragment having the sequence disclosed in SEQ ID NO:B (see Table 1B, column 5). In additional embodiments, the above-described polynucleotides of the invention comprise, or alternatively consist of, sequences delineated in column 6 of Table 1B which correspond to the same Clone ID NO:Z (see Table 1B, column 1) and have a nucleic acid sequence which is different from that published for the BAC clone identified as BAC ID NO:A (see Table 1B, column 4). In additional embodiments, the above-described polynucleotides of the invention comprise, or alternatively consist of, sequences delineated in column 6 of Table 1B which correspond to the same Clone ID NO:Z (see Table 1B, column 1) and have a nucleic acid sequence which is different

from that contained in the BAC clone identified as BAC ID NO:A (see Table 1B, column 4). Polypeptides encoded by these polynucleotides, other polynucleotides that encode these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention. Additionally, fragments and variants of the above-described polynucleotides and polypeptides are also encompassed by the invention.

[099] Further, representative examples of polynucleotides of the invention comprise, or alternatively consist of, one, two, three, four, five, six, seven, eight, nine, ten, or more of the sequences delineated in column 6 of Table 1B which correspond to the same contig sequence identifier SEQ ID NO:X (see Table 1B, column 2), or any combination thereof. Additional, representative examples of polynucleotides of the invention comprise, or alternatively consist of, one, two, three, four, five, six, seven, eight, nine, ten, or more of the complementary strand(s) of the sequences delineated in column 6 of Table 1B which correspond to the same contig sequence identifier SEQ ID NO:X (see Table 1B, column 2), or any combination thereof. In further embodiments, the above-described polynucleotides of the invention comprise, or alternatively consist of, sequences delineated in column 6 of Table 1B which correspond to the same contig sequence identifier SEQ ID NO:X (see Table 1B, column 2) and have a nucleic acid sequence which is different from that of the BAC fragment having the sequence disclosed in SEQ ID NO:B (see Table 1B, column 5). In additional embodiments, the above-described polynucleotides of the invention comprise, or alternatively consist of, sequences delineated in column 6 of Table 1B which correspond to the same contig sequence identifier SEQ ID NO:X (see Table 1B, column 2) and have a nucleic acid sequence which is different from that published for the BAC clone identified as BAC ID NO:A (see Table 1B, column 4). In additional embodiments, the above-described polynucleotides of the invention comprise, or alternatively consist of, sequences delineated in column 6 of Table 1B which correspond to the same contig sequence identifier SEQ ID NO:X (see Table 1B, column 2) and have a nucleic acid sequence which is different from that contained in the BAC clone identified as BAC ID NO:A (See Table 1B, column 4). Polypeptides encoded by these polynucleotides, other polynucleotides that encode these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention. Additionally, fragments and

variants of the above-described polynucleotides and polypeptides are also encompassed by the invention.

[0100] Moreover, representative examples of polynucleotides of the invention comprise, or alternatively consist of, one, two, three, four, five, six, seven, eight, nine, ten, or more of the sequences delineated in the same row of Table 1B column 6, or any combination thereof. Additional, representative examples of polynucleotides of the invention comprise, or alternatively consist of, one, two, three, four, five, six, seven, eight, nine, ten, or more of the complementary strand(s) of the sequences delineated in the same row of Table 1B column 6, or any combination thereof. In preferred embodiments, the polynucleotides of the invention comprise, or alternatively consist of, one, two, three, four, five, six, seven, eight, nine, ten, or more of the complementary strand(s) of the sequences delineated in the same row of Table 1B column 6, wherein sequentially delineated sequences in the table (i.e. corresponding to those exons located closest to each other) are directly contiguous in a 5' to 3' orientation. In further embodiments, above-described polynucleotides of the invention comprise, or alternatively consist of, sequences delineated in the same row of Table 1B, column 6, and have a nucleic acid sequence which is different from that of the BAC fragment having the sequence disclosed in SEQ ID NO:B (see Table 1B, column 5). In additional embodiments, the above-described polynucleotides of the invention comprise, or alternatively consist of, sequences delineated in the same row of Table 1B, column 6, and have a nucleic acid sequence which is different from that published for the BAC clone identified as BAC ID NO:A (see Table 1B, column 4). In additional embodiments, the above-described polynucleotides of the invention comprise, or alternatively consist of, sequences delineated in the same row of Table 1B, column 6, and have a nucleic acid sequence which is different from that contained in the BAC clone identified as BAC ID NO:A (see Table 1B, column 4). Polypeptides encoded by these polynucleotides, other polynucleotides that encode these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention.

[0101] In additional specific embodiments, polynucleotides of the invention comprise, or alternatively consist of, one, two, three, four, five, six, seven, eight, nine, ten, or more of the sequences delineated in column 6 of Table 1B, and the

polynucleotide sequence of SEQ ID NO:X (e.g., as defined in Table 1B, column 2) or fragments or variants thereof. Polypeptides encoded by these polynucleotides, other polynucleotides that encode these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention.

[0102] In additional specific embodiments, polynucleotides of the invention comprise, or alternatively consist of, one, two, three, four, five, six, seven, eight, nine, ten, or more of the sequences delineated in column 6 of Table 1B which correspond to the same Clone ID NO:Z (see Table 1B, column 1), and the polynucleotide sequence of SEQ ID NO:X (e.g., as defined in Table 1A or 1B) or fragments or variants thereof. In preferred embodiments, the delineated sequence(s) and polynucleotide sequence of SEQ ID NO:X correspond to the same Clone ID NO:Z. Polypeptides encoded by these polynucleotides, other polynucleotides that encode these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention.

[0103] In further specific embodiments, polynucleotides of the invention comprise, or alternatively consist of, one, two, three, four, five, six, seven, eight, nine, ten, or more of the sequences delineated in the same row of column 6 of Table 1B, and the polynucleotide sequence of SEQ ID NO:X (e.g., as defined in Table 1A or 1B) or fragments or variants thereof. In preferred embodiments, the delineated sequence(s) and polynucleotide sequence of SEQ ID NO:X correspond to the same row of column 6 of Table 1B. Polypeptides encoded by these polynucleotides, other polynucleotides that encode these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention.

[0104] In additional specific embodiments, polynucleotides of the invention comprise, or alternatively consist of a polynucleotide sequence in which the 3' 10 polynucleotides of one of the sequences delineated in column 6 of Table 1B and the 5' 10 polynucleotides of the sequence of SEQ ID NO:X are directly contiguous. Nucleic acids which hybridize to the complement of these 20 contiguous polynucleotides under stringent hybridization conditions or alternatively, under lower stringency conditions, are also encompassed by the invention. Polypeptides encoded by these polynucleotides and/or nucleic acids, other polynucleotides and/or nucleic acids that encode these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention. Additionally, fragments and variants of the above-

described polynucleotides, nucleic acids, and polypeptides are also encompassed by the invention.

[0105] In additional specific embodiments, polynucleotides of the invention comprise, or alternatively consist of, a polynucleotide sequence in which the 3' 10 polynucleotides of one of the sequences delineated in column 6 of Table 1B and the 5' 10 polynucleotides of a fragment or variant of the sequence of SEQ ID NO:X are directly contiguous. Nucleic acids which hybridize to the complement of these 20 contiguous polynucleotides under stringent hybridization conditions or alternatively, under lower stringency conditions, are also encompassed by the invention. Polypeptides encoded by these polynucleotides and/or nucleic acids, other polynucleotides and/or nucleic acids encoding these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention. Additionally, fragments and variants of the above-described polynucleotides, nucleic acids, and polypeptides are also encompassed by the invention.

[0106] In specific embodiments, polynucleotides of the invention comprise, or alternatively consist of, a polynucleotide sequence in which the 3' 10 polynucleotides of the sequence of SEQ ID NO:X and the 5' 10 polynucleotides of the sequence of one of the sequences delineated in column 6 of Table 1B are directly contiguous. Nucleic acids which hybridize to the complement of these 20 contiguous polynucleotides under stringent hybridization conditions or alternatively, under lower stringency conditions, are also encompassed by the invention. Polypeptides encoded by these polynucleotides and/or nucleic acids, other polynucleotides and/or nucleic acids encoding these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention. Additionally, fragments and variants of the above-described polynucleotides, nucleic acids, and polypeptides are also encompassed by the invention.

[0107] In specific embodiments, polynucleotides of the invention comprise, or alternatively consist of, a polynucleotide sequence in which the 3' 10 polynucleotides of a fragment or variant of the sequence of SEQ ID NO:X and the 5' 10 polynucleotides of the sequence of one of the sequences delineated in column 6 of Table 1B are directly contiguous. Nucleic acids which hybridize to the complement of these 20 contiguous polynucleotides under stringent hybridization conditions or

alternatively, under lower stringency conditions, are also encompassed by the invention. Polypeptides encoded by these polynucleotides and/or nucleic acids, other polynucleotides and/or nucleic acids encoding these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention. Additionally, fragments and variants of the above-described polynucleotides, nucleic acids, and polypeptides, are also encompassed by the invention.

[0108] In further specific embodiments, polynucleotides of the invention comprise, or alternatively consist of, a polynucleotide sequence in which the 3' 10 polynucleotides of one of the sequences delineated in column 6 of Table 1B and the 5' 10 polynucleotides of another sequence in column 6 are directly contiguous. Nucleic acids which hybridize to the complement of these 20 contiguous polynucleotides under stringent hybridization conditions or alternatively, under lower stringency conditions, are also encompassed by the invention. Polypeptides encoded by these polynucleotides and/or nucleic acids, other polynucleotides and/or nucleic acids encoding these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention. Additionally, fragments and variants of the above-described polynucleotides, nucleic acids, and polypeptides are also encompassed by the invention.

[0109] In specific embodiments, polynucleotides of the invention comprise, or alternatively consist of, a polynucleotide sequence in which the 3' 10 polynucleotides of one of the sequences delineated in column 6 of Table 1B and the 5' 10 polynucleotides of another sequence in column 6 corresponding to the same Clone ID NO:Z (see Table 1B, column 1) are directly contiguous. Nucleic acids which hybridize to the complement of these 20 lower stringency conditions, are also encompassed by the invention. Polypeptides encoded by these polynucleotides and/or nucleic acids, other polynucleotides and/or nucleic acids encoding these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention. Additionally, fragments and variants of the above-described polynucleotides, nucleic acids, and polypeptides are also encompassed by the invention.

[0110] In specific embodiments, polynucleotides of the invention comprise, or alternatively consist of, a polynucleotide sequence in which the 3' 10 polynucleotides of one sequence in column 6 corresponding to the same contig sequence identifier

SEQ ID NO:X (see Table 1B, column 2) are directly contiguous. Nucleic acids which hybridize to the complement of these 20 contiguous polynucleotides under stringent hybridization conditions or alternatively, under lower stringency conditions, are also encompassed by the invention. Polypeptides encoded by these polynucleotides and/or nucleic acids, other polynucleotides and/or nucleic acids encoding these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention. Additionally, fragments and variants of the above-described polynucleotides, nucleic acids, and polypeptides are also encompassed by the invention.

[0111] In specific embodiments, polynucleotides of the invention comprise, or alternatively consist of a polynucleotide sequence in which the 3' 10 polynucleotides of one of the sequences delineated in column 6 of Table 1B and the 5' 10 polynucleotides of another sequence in column 6 corresponding to the same row are directly contiguous. In preferred embodiments, the 3' 10 polynucleotides of one of the sequences delineated in column 6 of Table 1B is directly contiguous with the 5' 10 polynucleotides of the next sequential exon delineated in Table 1B, column 6. Nucleic acids which hybridize to the complement of these 20 contiguous polynucleotides under stringent hybridization conditions or alternatively, under lower stringency conditions, are also encompassed by the invention. Polypeptides encoded by these polynucleotides and/or nucleic acids, other polynucleotides and/or nucleic acids encoding these polypeptides, and antibodies that bind these polypeptides are also encompassed by the invention. Additionally, fragments and variants of the above-described polynucleotides, nucleic acids, and polypeptides are also encompassed by the invention.

[0112] Many polynucleotide sequences, such as EST sequences, are publicly available and accessible through sequence databases and may have been publicly available prior to conception of the present invention. Preferably, such related polynucleotides are specifically excluded from the scope of the present invention. Accordingly, for each contig sequence (SEQ ID NO:X) listed in the third column of Table 1A, preferably excluded are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 and the final nucleotide minus 15 of SEQ ID NO:X, b is an integer of 15 to the final nucleotide of SEQ ID NO:X, where both a and b correspond to the positions



of nucleotide residues shown in SEQ ID NO:X, and where b is greater than or equal to  $a + 14$ . More specifically, preferably excluded are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a and b are integers as defined in columns 4 and 5, respectively, of Table 3. In specific embodiments, the polynucleotides of the invention do not consist of at least one, two, three, four, five, ten, or more of the specific polynucleotide sequences referenced by the Genbank Accession No. as disclosed in column 6 of Table 3 (including for example, published sequence in connection with a particular BAC clone). In further embodiments, preferably excluded from the invention are the specific polynucleotide sequence(s) contained in the clones corresponding to at least one, two, three, four, five, ten, or more of the available material having the accession numbers identified in the sixth column of this Table (including for example, the actual sequence contained in an identified BAC clone). In no way is this listing meant to encompass all of the sequences which may be excluded by the general formula, it is just a representative example. All references available through these accessions are hereby incorporated by reference in their entirety.

**TABLE 3**

Clone ID NO: Z	SEQ ID NO: X	Contig ID:	EST Disclaimer		Accession #'s
			Range of a	Range of b	
H7MCE35	11	928554	1 - 59	15 - 73	AI139000, AA884996, AA889649, and AA724461.
H7MDC49	12	722780	1 - 148	15 - 162	AW182856, AI218191, AA834537, AA804628, AA827835, AF034780, and E07989.
H7MDD72	13	847688	1 - 592	15 - 606	AI681511, AA677498, AI799484, AI360937, AI378075, AI457270, AI363333, AI681227, AI806180, AI363339, AA972313, AA627925, AI984311, AA483815, N25951, AI250808, AI417147, AW297301, AI079688, AW009637, AI289263, AA768395, AA769533, AW085089, AW368116, AW067835, AI110587, N26848, W15533, AI129095, AW298190, AI300955, AI870137, AW410019, AI808400, AA748383, AA479673, AW269239, AA281561, AA807144, AW291197, AW373450, and N42781.
HAOSH55	14	952380	1 - 694	15 - 708	H93040, H93056, AA719305, AA808945, AI342677, AA742815, AC006581, AP000045, AP000113, AC007684, AC002404, AC003070, AC003042, AP000327, AC003043, AC005829, AB023048, AP000123, AP000170, AP000055, AC007066, AC002350, AC005399, AI135744, AC005031, AF001549, AC004913, Z95114, AI031663, AI008729, Z97054, AI133355, AC000381, AC005207, AC009516, U80017, Z81370, AC006023, AC006449, AC005296, AC005069, AC000118, AC004821, AC006146, AC005037, AC006441, AI109798, AI031432, AI080243, AC004819, AI109627, AC002477, and AC004882.
HAQAK73	15	764671	1 - 728	15 - 742	
HAQAM17	16	664979	1 - 347	15 - 361	
HAQBF84	17	783259	1 - 56	15 - 70	
HAQBJ71	18	839982	1 - 409	15 - 423	
HAQBQ50	19	522004	1 - 83	15 - 97	
HAQBS37	20	847519	1 - 710	15 - 724	AW168869, and AI904433.
HAUBD69	21	529711	1 - 121	15 - 135	
HAUBU10	22	968339	1 - 324	15 - 338	AW419224, AW419225, and AW419223.
HBCJS08	23	957826	1 - 492	15 - 506	AI119483, AA809125, AI119444, AA835346, AI188940, AC016027, AC016830, AC005529, AC005261, AC004531, AC005255, AC006137, AC006080, AI049874, AI132777, L44140, AI031983, AC006515, AC004659, Z85987, AC005531, AF134726, AC006441, AC004858, AF053356, AP000552, AC005740, AP000503, AC012627, AC004882, AC003108, AC007934, AI049758, AC005181, AF109907, AC004033, AC005091, AC007685, AC005971, AC003663, AC005274, AC005089, AI049829, AC006449, U96629, AC004973, AI049872, AC007283, AC005057, AC004231, AI035413, AI078638, AC006023, AC005815, AI031311, AI023803, AC005821, AI049780, AI031228, AC005919, AP000555, AI049631, AC004895, AC005072, AC005736, AI021155, AI022165, AI133448, AI133245, AC007055, AI008718, AC004526,

HBCPD14	24	963634	1 - 127	15 - 141	AC007065, AL049776, U07563, AL035681, AP000114, AP000046, AF205588, AC005231, AC005841, AC004491, AC007193, AC007878, AL031591, AF038458, AL049869, AC012384, AC003002, AL133485, AL109984, AC004983, AL121653, AC005049, AC005839, AC002418, AC004386, D84401, AC003037, AC002091, AL049538, AC002070, AF045555, Z93244, AC006468, AL022316, AC006141, AC004854, AC005067, AC005768, AC007993, AL008719, AC004522, AC004099, AC006512, AC005088, AC004884, AL031427, AD000092, AC005624, AL109758, Z70281, AC004859, AC005081, AL079295, AC002425, AB026898, AC004985, AL035072, AC005484, AC004816, AC005914, AL121754, AC004890, AC005746, AL121757, Z86090, AL109627, AL133163, AC000003, AC009721, Z82250, AC007057, and AC005071.
HBCQJ03	25	922401	1 - 124	15 - 138	AW392670, Z99396, AL119319, AL036418, AL036858, AW372827, AW384394, AL119457, AL119483, AL119324, AW363220, AL119484, AL119391, AL119497, AL119522, U46351, AL119418, AL119355, AL119443, AL119363, AL037094, AL119341, U46341, AL134902, AL119396, U46349, AL119401, U46350, U46347, AL042551, AL037205, AL119335, AL119496, AL119439, AL134536, AL036196, AL037082, AL119444, AL134525, AL036268, U46346, AL038837, AL042614, AL134920, AL043019, AL042984, AL037051, AL042965, AL042975, AL036725, AL042544, AA631969, AL119399, AL134538, U46345, AL042542, AL043029, AL042450, AL043003, AL036924, AL037526, AL119464, AR066494, AR060234, A81671, AB026436, AD001527, AR054110, AR023813, AR064707, and AR069079.
HBCQS90	26	951787	1 - 507	15 - 521	AA191298, AW364854, AI205727, R16601, and AI188004.
HBCQS93	27	930682	1 - 607	15 - 621	AA703200, W88470, and Z39990.
HGBGD28	28	525846	1 - 314	15 - 328	
HGBGF56	29	957870	1 - 240	15 - 254	
HGBBG42	30	922396	1 - 689	15 - 703	N33183, AA169202, AI393342, AW172574, AA731731, AI961101, AA872188, W17122, AI219418, AA609341, AA485152, AW293905, AI221103, AI910881, AW195626, AA856740, AA767183, AW072218, AA929018, AI338682, AA836394, AA448345, AW293908, AI264116, W26762, AA766127, AA761418, H30745, AA315954, AI022328, AI032738, AI203338, AI768542, AI979322, AA470714, AA303837, AA992529, AA764904, AA627584, AA769119, AA169659, AI217749, W70324, AA333338, AI250852, AI635634, AI147877, AI382313, AI377000, AI520946, AI955310, AL036241, AI638523, AI589668, AA814517, AA001397, AI096773, AF122922, and Y14314.
HGBBH43	31	524532	1 - 183	15 - 197	AI863446, AI188331, AW014913, AI073437, AW291378, AI130693, AI768987, and AA890464.
HGBBS07	32	954299	1 - 403	15 - 417	AA2229977, N41881, N23545, H78888, H54240, AW270016, and AA569612.
HGBBT79	33	525352	1 - 318	15 - 332	
HGBBW60	34	954916	1 - 555	15 - 569	AI808278, AI697307, AI936570, AW167940, AI379188, AI669686, AI751739, AW450137,

					AI868311, AI203915, AW182104, AW014255, AI766481, AI821507, AA548667, AA194990, AF061970, U81600, and X52875.
HGBW72	35	524956	1 - 321	15 - 335	
HBGDA44	36	525618	1 - 493	15 - 507	
HBGDE85	37	524875	1 - 125	15 - 139	
HBGDS13	38	971696	1 - 245	15 - 259	
HBGDT43	39	974223	1 - 433	15 - 447	AI567076, AW270343, AA169263, AW275510, AI801482, AA362511, AI933534, AA847499, AA580808, AA226363, AA502104, AI311927, AA569471, AL042753, AL048925, AA502860, AI133297, AI499588, AW021583, AA531079, AW248819, F25733, AW341900, AA101689, R86151, AA494102, AA482923, AA715255, AA715267, AA516222, AA758934, AI783494, AA602047, AI751216, AA664909, T60681, AA320966, AL119691, AA428792, AA828042, AI445674, AW062724, AA493695, AW302013, AA469451, AI281881, AW193461, AI919265, AA484679, AA632612, AI085719, AA601202, AA653375, AA491862, AA713891, AI687343, AA491650, AI584186, AA468456, AA757775, AW438643, AL036037, AA577959, AI873990, AA568869, AA515334, AA668807, AA508359, AI872020, AW023990, AA643455, AI282511, AA658362, AA724333, H73082, AI538870, AW073060, AA908687, AA487621, AA493621, AA620467, AI471887, AI368256, AI240168, AI345157, AL038705, AA683238, AI568678, H71429, AA662225, AA470969, AI797903, AA488746, AA719292, AA846952, AA804925, AW084466, F27407, AA837791, AI589461, AA747594, AI933299, AI564454, AI924872, AA572713, AI708139, AA490183, AA019312, AI583283, AI054343, AL042547, AW274349, AA811153, AA446544, F17555, AA368059, AW050498, AI338350, AA478355, AA773472, AA634889, AA502155, AA665021, AI247199, AI559251, R02632, AA484373, AW050734, AW235497, R40056, AW193265, AW273218, AW021207, AI472222, AA633753, AW408047, AW303196, AI350211, AW301809, AA668639, AA584581, AA573725, AW247819, AI669453, AA805846, T06754, T09071, AA623002, AW104030, AA806796, AA773902, AA577906, AI625647, AA515909, AI521679, AW302903, AA483223, AI801600, AA581903, AW075948, AI692808, AA503600, AI284640, AI589230, AI744995, AI860013, AW407578, AA629874, AW327868, AI702314, AA181823, AA704009, AA189117, AA743716, AL135377, AL044858, AI859742, AA179944, AI110844, AI110770, AW300625, AI754658, AL119984, AI354388, AI285576, AI873852, AI903462, AA487417, N64587, AW131155, AW301350, AA578861, AA493708, AW196064, AI241821, AL119166, T74382, AI807762, AI381253, AA828767, AI656840, AA501615, AA758366, AL078634, U82671, AP000569, AP000301, AC006255, AP000114, AP000045, AC005668, AC007556, AC007878, AC005191, AF085954, AC005089, AC005261, AL133276, U67827, X75335, AC006571, Z68278, AF039906, AL022320, AL049758, AC007286, AC012599, AC004230, AC002310, AC005385, U62317, Z97053, AC004112, AL022316, AC010200, AC002091, AL031283, AF107885, AC005284, AC005406,

					Z84484, AL049776, Z98949, AC005295, AL078603, L29074, AL049853, AC005296, U67825, X55929, M22900, AC004076, AL050348, AL049736, AL022725, AB014079, AD000833, AL121778, U29953, Z82245, Z69713, AF002993, Z92845, AL133494, AC005306, U76377, Z92846, AC006139, AC002384, AL022311, AF104455, AC007033, AP000339, AF157623, AP000326, AL008728, AC004389, AF038458, AF095725, AP000054, AP000169, AP000123, AP000495, AP000122, AP000217, AL022717, AC005162, AC004991, AP000345, AC003686, AC004842, AC004150, AC004466, AF196972, AL035696, AP000689, AL031588, AL049557, AC005589, AL049697, Z85986, AP000346, AC005837, AL022721, AC006529, AC009399, AC005028, AC004554, AP000493, AC005071, AC005332, AC006042, X55931, AC011625, AL049545, D63507, AF067122, AC003108, AC005765, AC007792, AC000070, AC005514, AC005920, AC007297, AC006312, AC002316, AC004161, U95739, AL023575, Z95113, AL110502, AC006538, AP000517, AC007567, AL021977, D83989, U18390, X55932, AC003029, AL109799, AC005193, AC002119, AL049759, AL035252, Z22650, D83737, AC004615, AC007364, AF001298, AB003151, Z69666, U75285, AC005745, AL022168, Z54146, AP000298, AC004693, Z68869, AB023052, Z69838, Z54334, AF015723, Z97634, Z82976, AC007787, AC006138, AC004152, AC004678, AC004490, AC005790, AC008975, AF006752, AC004036, AC005620, AC002314, AF039907, AC002984, AC005175, AC004205, AC007565, AC004210, AC007229, AL049856, AP000401, AC003960, AC005781, AC005619, AL080242, AP000261, AL031273, AC006388, AC006561, AC005072, AF146367, AC002390, AC004455, AC004650, AC004901, AC004024, Z99569, AL096794, AC004149, Z97988, Z97196, AC002559, AP000246, AL024474, AF190465, AL008710, AL031594, AL022240, AP000035, AP000044, AP000112, AP000513, AP000100, AP000159, AP000017, AP000508, AC004522, AL050341, Z99916, AC006004, AC002115, AC004584, AL009051, AF124523, AC006037, AC004226, AL050401, AC007242, AL049699, AC006539, AC002468, AC005532, AC010209, AC004815, AC006458, AC003982, AC005996, AC005045, AL031295, AC005247, AC006019, AC004933, Z97056, AL034561, AC005244, AL078624, AF118808, AF207550, AC007228, and AC004883.
HBGFA62	40	954306	1 - 628	15 - 642	AL479262, AW082836, AA877924, AA513292, AA700228, AL244885, AL041763, AL345227, AW275318, D25718, AW001271, AL902419, AA687630, AL349742, AL306060, AL309420, AL307478, AL343141, AW075033, AL266766, AL371550, and AW075142.
HBGMD05	41	870189	1 - 575	15 - 589	AW393804, AW001436, W42981, AL766185, AA706041, AL365102, AL380655, AW290901, and AL126989.
HBGMD62	42	933763	1 - 315	15 - 329	Z98258.
HBGME10	43	966132	1 - 555	15 - 569	AA532449, AA043318, AL872402, AL524324, AA527086, AA514662, AA659799, AA971274, AA470758, AA602448, AL022054, AA861977, AL636322, AL865691, AL209021, AL055999, AA640580, AA053310, T52958, AL313402, AA058606, AW166625, AW004703, AL348693,

					AA436104, T61144, T52957, AI696664, AA043317, AW449638, AA129864, AI499456, AI972817, AI424348, AI918494, and AA436005.
HBGMG29	44	845194	1 - 328	15 - 342	
HBGMZ39	45	947112	1 - 588	15 - 602	AI820661, AI791493, AA989356, AI791282, AI732537, AI792053, AW207804, R22360, R72427, AA505927, R22019, and R72474.
HBGNA08	46	958257	1 - 223	15 - 237	
HBGND09	47	848219	1 - 1164	15 - 1178	AA781868, AW152318, AA482996, AA909463, AA758672, and AF156271.
HBGNJ14	48	914594	1 - 317	15 - 331	AC004156.
HBGNM13	49	912730	1 - 348	15 - 362	AW177440, C14389, T03269, AI905856, AW352117, AW179328, AW360811, AW178893, AW366296, AW375405, D58283, AW378532, D59859, D80022, C14331, D80166, D80195, AW177501, D80193, D59927, D59467, D51423, D59619, AW177511, D80210, D51799, D80391, D80164, D59275, D80240, D80253, D80043, D59787, D80227, D59502, D81030, D80212, D80196, D80188, D80219, C14014, AW176467, C15076, D80038, D80269, D59610, D57483, D80366, AA305409, C14429, D51022, D50979, D50995, D59889, AW178762, D80024, AW377671, D80378, AW178775, AW360844, D80045, AW360817, AA305578, D51060, AW375406, AW378534, AW179332, AW377672, AW179023, AW178905, D80134, D81026, D51097, AW352170, AW352158, AW352171, AW377676, AW177731, AW178907, AW178906, D80248, AW179019, AW179024, D80522, AA514186, AA514188, C75259, D80133, AW177505, AW179020, D58253, AW178909, AW177456, D80251, AW179329, AW178980, AW177733, AW378528, AW178908, AW178754, AW179018, D80132, AW367967, D80268, AW179004, D80302, AW178914, AW178911, D80439, D80247, AW178774, AW352174, T48593, AW177723, AW178983, D51103, AW367950, AW178986, AI535850, D45260, X82626, A84916, A67220, D89785, A62300, A62298, Y17188, A78862, D34614, D26022, D88547, AJ132110, AR018138, X67155, A25909, AR025207, AB028859, AR008278, Y12724, AF058696, AB012117, A94995, AR008443, A85396, AR066482, I18367, A44171, A85477, I19525, A86792, I50126, I50132, I50128, I50133, X93549, AR066488, D88507, A82595, AR066490, AR016514, D13509, D50010, AR060138, A45456, A26615, AR052274, Y09669, AR060385, AB002449, AR066487, A43192, A43190, AR038669, A30438, AR008408, U79457, AR060133, AF135125, and AR008382.
HBGNO07	50	952212	1 - 369	15 - 383	AA488707, AA129219, H49568, AI345366, AI310873, AA476397, AA535216, AA086368, AI268334, AI268336, AW021583, AI500453, AA420998, AA421078, AA657835, AI041345, T11634, AA601327, AA431949, AI762314, AA676971, AW157005, AA346367, AI537041, AW008450, AA600869, AA346368, AI051037, AA493621, AA527209, AA186329, AA533281, AA186367, AA579367, AA683238, AA418861, AI884383, AA744018, AA776899, N23392, AL038736, AA478716, N29455, AI702314, AW276835, AA833896, AA833875, AA484373, H56430, AI028510, AA992126, AA579208, AW189384, H49091, AI469599, AA522642,

					AI590580, AL031710, AC007617, D32060, AC004859, AC008372, AL079340, U52112, AL022311, AC002364, Z74739, AC005089, AL023575, AL031779, AL033522, AL035086, AC011331, Z93783, Z82249, AL022237, AL049643, AD000684, AC002128, AL080242, AC000056, AL022150, AL049538, AC005800, AL109657, AC002565, AL022312, AC007242, AP001054, AL031296, AL024498, AC002312, AC005189, AC004032, AF048729, AC007787, AC004017, AC007999, AL022320, U78027, AC004548, AC005091, AC005833, AL035422, AC000029, AC007510, AC006013, AL121769, AL022165, AC004887, AC007055, AC009498, U47621, AC006166, AB023051, AC004099, AC005027, AP000512, AL031466, U89337, Z95113, AF129756, AB007944, AC004699, Z97054, AC005066, AP000505, AC002997, AC002511, AC006057, AC005254, AP000348, AC005619, AP000220, AP000159, AP000084, AC005095, AL031846, AL078593, AL133485, AC006316, AC004033, Z97053, AC002465, AC005609, AC007879, AC005011, AC006064, AC005237, AC005234, AC005158, AL022330, Z99716, AL109984, U73635, U07561, AC004462, AC003072, AC004030, AC002984, AC005387, AL121934, AF184110, AL109952, AC004656, AC005219, AC004771, AL031594, Z98048, AC003688, AC008103, AL008715, AC003103, AC007326, AC006597, AF128525, Z93023, AL021155, L77570, AL050310, AL031005, AC004408, AC002996, AC004796, AC003964, AC005608, Z84480, AC003982, AL022326, AB023049, AL031295, AC004822, AC007845, AC005738, AL021528, AL133245, AL121653, AL049636, AC005880, AC004984, AC005399, AC005666, AC004832, AC005220, AC005411, AL031120, AC007325, AC016025, AC004805, AC006059, Z98050, AC016026, AL135744, AL109865, AC007156, AC005323, and Z95114.
HBGNQ31	51	887152	1 - 355	15 - 369	AI097455, AW073155, AI690321, AA283204, AI739096, and AI968607.
HBGNW29	52	969396	1 - 421	15 - 435	AI809990.
HBGOB07	53	883111	1 - 465	15 - 479	RI5924, AI796491, AI346263, AA767342, AW173117, AW148990, AA860973, AI014603, AI640629, AI658566, AA506436, AI368262, AA768887, AI500714, AI355779, AI458779, AI811626, AW081866, AA761573, AI683292, AI472126, S69381, AL008706, AF106657, and T66550.
HBGOJ28	54	967261	1 - 585	15 - 599	AW406518, R27278, W05444, W87344, AI159814, N56542, W87345, AA053475, AI905956, T53519, AW004657, AI743733, AA468421, AW001343, AA860298, and AA578670.
HBGOK53	55	848156	1 - 621	15 - 635	AI459692, AW150902, AA781854, AI823723, and AC006255.
HBGOL08	56	958290	1 - 449	15 - 463	AA113287, D29499, AW294903, AW298373, AW297351, AW294452, Z40314, AI623657, D29192, and AI143487.
HBGPE04	57	926876	1 - 480	15 - 494	Z98049.
HBGPH02	58	918513	1 - 508	15 - 522	AI167166, AI034322, AA084622, AA457685, AI246080, AA448838, AI754291, AW243793, AI285521, AI816537, H55894, AC003037, Z97054, AC005913, AC006077, AL023879, AC003007, AC004953, AC005632, AP000356, AL049776, AC003108, AL035086, AF134471,

					AC002126, AC016027, AL022323, AC006312, AL133448, AJ003147, AC020663, AC005908, AL031295, AC005972, AC003051, AC016830, AC007845, AL096701, AC009509, AC006040, AC002432, AC006211, AC008126, AF196779, AC006538, AL096791, AC007686, AC002470, AC009516, AL008718, AC016025, AC005071, AC007308, AP000555, AL139054, AC005971, AP000501, AC006536, AL135744, AC003109, AC002365, AP000257, AC003029, AC006254, AC002351, AC004148, AC005015, AL080243, AC005412, AF207550, AC005057, AC003104, L78810, AC006111, AL133249, AL031662, AL022165, AL121655, AL035415, AF067844, AC008044, AL031432, AC007216, AC005778, AC008372, AC003110, AC004167, AC005696, AL049692, AL021453, AC009464, AC007011, AL022326, AC007285, AC012627, AF031078, AL023807, AC000068, AL024498, U95740, AF111169, AF030876, AC005409, AC000134, AL035455, AL022476, AL022316, AC007363, AL034548, AC004990, AC011311, AC005841, AB023049, AC006468, AC004813, AP000512, AC005529, AC004024, AL024507, AL033527, AL022163, AL034549, AC004883, AC004448, AL117344, AC003101, AC007240, AC005920, AP000503, AC007688, AL031311, AC004821, AC005411, AC005519, AC002456, AL133163, AC002312, AC004859, AF091512, AC007488, AC005488, AL031255, AC005940, AC004934, Z82215, AC005484, AC005081, U78027, AC010206, AL133245, AL008582, Z93023, AC006511, AC006285, AL132712, AC002531, AC005666, AC004019, AC006965, and Z951114.
HBGPK33	59	973425	1 - 696	15 - 710	
HBGPV05	60	930706	1 - 607	15 - 621	
HBGGQ66	61	954302	1 - 356	15 - 370	
HBGSD40	62	923142	1 - 526	15 - 540	AI554033, AW072396, AI391722, AI703323, AI278195, AI681504, AW015130, AI378014, AI869650, AA028102, AW341627, AI674186, AA253036, AA918302, AI242366, H27749, R52130, AI203836, AA253072, AI473245, H18391, H29918, H45059, H46854, H46789, H18178, H18179, H46768, H45025, AA028123, H29829, H46718, and H18392.
HBGTK11	63	965509	1 - 261	15 - 275	
HBGTL01	64	914573	1 - 636	15 - 650	AI333621, AI655982, AI635579, AW014176, AI365145, AA758176, and Z97986.
HBGTR84	65	886529	1 - 753	15 - 767	
HBNA01	66	966536	1 - 126	15 - 140	AI865067, AW272770, Z28887, R71650, H97886, AA564346, H68773, H59762, AA025159, AA025578, AA129730, AA167746, AA416665, AI359427, AA908506, AA554889, AI040310, AA890292, AW085815, AA292680, AI192586, AI672645, AI086456, AI086880, AI289899, AA524469, AA708866, AA630222, AI435170, AI192590, AI027640, AA541738, AI660871, AI346559, AI970609, AA873432, AA815359, AI300157, AI300558, AI346676, AW044620, AI982695, AI986013, N23343, AA872691, AA741346, AA873873, AA777182, AA857133, AA676868, N53944, H80871, N53661, R31880, H51417, R85259, AA775814, R31095, AA906957, H57155, N93620, H02122, AA659321, AW020777, N28815, AA417245, AI422162, H96301, H51459, AA025977, AI133344, H23915, and AF129332.



HBNAF14	67	660800	1 - 267	15 - 281	
HBNAI71	68	655514	1 - 321	15 - 335	
HBNA41	69	655842	1 - 299	15 - 313	
HBNAW92	70	524954	1 - 274	15 - 288	AF107885.
HBNAW71	71	530843	1 - 73	15 - 87	
HBNAW58	72	558193	1 - 492	15 - 506	T47565.
HBNAW52	73	524869	1 - 366	15 - 380	
HBZAJ09	74	655769	1 - 329	15 - 343	
HBZSH16	75	655619	1 - 384	15 - 398	
HBZSH71	76	760418	1 - 288	15 - 302	AI339869, AA669158, AI589895, AI055909, AW131819, AA994746, AI055952, AW072134, AA504384, AA588867, AA558699, and AA504125.
HBZSI73	77	655737	1 - 339	15 - 353	AA300051, AA317019, AA086322, AA147482, AA112027, AI903350, AI903380, AI903419, R48705, AC005005, AF115565, Y13492, AJ010306, AF064238, and Z49989.
HBZSK17	78	664013	1 - 369	15 - 383	AI493588, AL134598, AA928539, AI500061, AI440260, AI539690, AW300782, AW300889, AW089844, AA641818, N22276, AI355235, W48671, AL046926, AI766348, AI587114, AI114703, AI473536, AW020046, AI631240, AL118752, AI349279, AW020419, AI702065, AW075382, AI251221, AI687130, AL047422, AL038605, AW022102, AI539260, AW020693, AI590043, AI336513, AI969655, AI307569, AL048323, AI348895, AI307494, AL047172, AI336495, AI335476, AI335363, AI815855, AL048340, AI340627, AI334450, AA555145, AW021662, AI348854, AI344935, AI334895, AI866465, AI865116, AI349245, AI559752, AI538850, AI499570, AI310930, AI446721, AI567971, AA503384, AI401697, AI538564, AL118781, AI312261, AI349958, AL046200, AL047344, AI349814, AI638644, H41759, AI336503, AI866646, AW020397, AW301861, AI267185, AI345005, H92687, AI553645, N25033, AL047655, AW023338, AI349186, AI538764, AI784233, AI340511, AA808175, AW059828, AI866503, AI345014, AW022494, AW020288, AI584118, AW162189, AA420722, AW020095, AI624543, AL046227, AW021717, AI345527, AI345745, AL120756, AI538885, AI340552, AI690411, AI579901, AI345736, AI345131, AL047100, AI758583, AA502794, AW086082, AA659314, AI307736, AI335208, AI581033, AW020710, AL042745, F28295, N29277, AI633125, AI366959, AA635382, AA176980, AI815232, AI868475, AI572096, AL045413, AI500714, AI343030, N67350, AI538008, AI471909, AI567883, AI312210, AI923989, AI284517, AI560545, AI627714, AI619820, AW059766, AI207656, AI611728, AW151138, AI241678, AI634736, AI348969, AW022636, AI927233, AA062896, AA042949, AI340603, AI801325, AI537273, AI682934, AI371251, AW152182, AI702527, AI472487, AI436429, AI859991, N81164, AI564716, AL079963, AI690472, AI036705, AI500662, AI624304, AI366992, T99953, AI698391, AW079768, AI868180, AI784214, AI800367,

AL571699, AI915291, AI336512, AI336565, AL036403, AI582932, AI872423, AI334893, AW303084, AL043345, AI349944, AW302854, AI434731, AI524179, N27632, AI345666, AL045163, AL041208, N52016, AI521560, AI89189, AI521005, AI873604, AI524654, AI621341, AW271119, AI539800, AI648494, AW020381, AA928547, AI683250, AW104141, AI309306, AI691131, AA857847, AI002285, AI479292, AI310575, AI343091, AI252748, AI918554, AI866469, AI860027, AL042432, AI499104, AW161402, AW188525, AI340644, AL045606, AW263569, R75918, AA811736, AI952433, AI500523, AI310582, AI701097, AW020415, AI635634, AI334930, AI309443, AI349622, AI884318, R41605, AI307520, AI355779, AI335209, AI521799, AW238688, AI310606, AI345026, AL048644, AI307454, AI783997, I48978, A08907, AL050116, AL133112, U58996, AL080234, AF026124, AL137329, AF177401, X63574, I48979, AL110196, I52013, AF090900, A08910, A08909, AF017790, U79523, AR036183, A08913, A21101, AF013249, A08908, S7771, A08912, AR068466, A08911, AF100931, AL117457, AL137533, L13297, AJ005690, AF201468, S76508, E05822, AL117460, AL023657, AL080156, E12580, AF100781, AL137258, X89102, A91160, X57084, A91162, I08319, AL133560, I79595, AF002985, X87582, I89931, Y13350, AF176651, AL137554, AL137471, S53987, AL137488, AL096751, S78214, AR038854, I89934, AF113694, AF090934, AF017437, S78453, I49625, Y18680, AF215669, Y11254, AF118090, AR068753, AL096744, U78525, I03321, AB016226, AF113677, AR068751, A18777, AL133113, E07108, I89944, AL122110, AF091084, A08456, A31057, S36676, AF090943, AF142672, AL136842, E01614, E13364, L04504, X53777, A23630, AF115410, A21103, X97899, A20553, AJ000937, I89947, AF112208, AF106657, Y07905, AL050092, AL133010, AJ006417, AL080163, AF098162, E12579, AL110218, U88966, A58524, A58523, AR066485, AL137478, I18355, A76335, U53505, AF038562, AL137459, AF079763, AF106697, I34392, AF000301, A93914, AL110225, AL080118, E01573, E02319, AL049324, I28326, Y16645, I33391, I80064, I33392, AR029490, AF111851, AL133557, A08916, AL049466, AL137537, S61953, AL136884, AF141315, AF067728, X80340, AL117583, AL110197, AL137656, AL122093, AB028451, AL050393, I36502, A17115, A18079, I77092, AL080074, AR020905, AR050959, X56039, AF118094, Y18678, AL133558, AL117644, AL133080, AF113699, AL110296, U83980, AB007812, E01314, AF090903, A58545, Y10080, AR005011, AL117435, U35846, AL122123, E06743, D83032, X06146, D16301, AC004200, AP000083, AL137539, AL137627, AF113690, AF114170, AF028823, U54559, AF126247, AF097996, AL050024, E03671, AL117587, AL049430, AL122106, AF076633, AL117416, AL137648, AF153205, AJ238278, AL137281, U30290, AL133075, M27260, Y09972, I09499, AF185576, I32738, AF137367, AL137641, U91329, AF057300, AJ012755, AF057299, X83508, AC006313, E08516, L04849, AL117648, AF082526, X79812, AL080146, U57715, E02349, AF118092, AL050172, X70514, AF090886, AF117657, AF125948, I25049, I25048, AF016271, A27171, AL117394, AL137294, A03736,					
---	--	--	--	--	--

						AB029065, AF061573, X72889, A15345, AF026816, AL080124, X81464, D44497, AL049382, and AF069506.
HCBNW02	80	950897	1 - 508		15 - 522	
HCBNW07	81	951820	1 - 415		15 - 429	A1419479, A1084317, AW072920, A1350149, AA847656, AA931572, A1423647, A1983432, A1056162, AA826926, A1478982, T50766, C00534, and AC005803.
HCB0G03	82	922351	1 - 469		15 - 483	
HCDMB01	83	915613	1 - 430		15 - 444	AL042428.
HCDMB16	84	835781	1 - 261		15 - 275	
HCDMB60	85	726339	1 - 107		15 - 121	A1590413, A1869343, A1955933, AA593639, A1886450, AA576909, A1371486, A1971730, AA602301, A1421322, A1383426, A1371487, AW059533, AA858249, C00365, Z41784, F17104, A1200274, AW166558, AW337598, AA232052, AA280665, AA731352, AA729138, AW206613, AW241202, M62039, A1932508, AA769242, A1865740, A1866738, A1858186, H12707, AA434237, A1863089, A1874192, N22963, A1349363, A1161110, AA622939, A1625498, AA280821, AW264859, AW198004, A1689114, A1298884, A1311832, W93266, AW152359, AA905965, AA280666, AA044299, H20483, AW273322, AW117633, AA872094, A1811143, AW268474, AA838719, A1858578, AW303327, AW081605, N63438, A1744276, A1992061, AA603101, A1189379, T78004, H62603, AW291643, R72899, H53116, AW193894, H52807, H42028, A1521005, AA745254, A1819014, A1624624, A1859693, A1613489, A1473536, A1696603, A1284013, T69241, AA831128, A1818562, A1674627, AA102339, AL042193, AF106657, AF184965, AL137488, AF060866, X69026, A58545, AL137284, AF076633, AC010077, AL137657, AL080154, AL050155, AL137480, and AJ005690.
HCDMC01	86	915239	1 - 1444		15 - 1458	A1201296, AA421493, A1015515, AA401557, AA693498, AA815294, AA609724, AA608961, AA705839, A1016248, AA400144, AA971327, A1656796, AA383127, AA725026, AA815293, AA609137, AA421507, A1024165, and AC005789.
HCDMD23	87	676799	1 - 171		15 - 185	
HCHAD40	88	923764	1 - 337		15 - 351	AL039087, AL037259, A91754, A49700, AR031375, A58521, AR020969, A44171, I56772, I95540, A63067, A51047, A63064, A63072, AR068507, AR068506, AR031374, AR018924, AR000006, AR015960, AR000007, AR015961, AR051651, A94046, A94054, I58322, I58323, A38214, A49701, E12566, E12564, E12565, A18051, I01012, E02455, AR067785, A00782, A14595, A18755, I12245, A92666, A25856, A92668, A92667, A18050, A02741, I77211, AR007512, A80476, A80477, I56770, I56771, I25041, AR027319, A91752, A91751, AR027318, A95274, Z73334, A06633, AR029417, I58669, I85513, AR067733, AR027100, AR009152, AR009151, AR027099, I07209, I07249, A63954, A93445, I25027, I26929, I44515, I26928, I26930, I26927, I44516, Z96177, A93936, AR067731, AR067732, A60206, AR035224, A49045, A27169, X85060, AR016495, AR029418, I91969, A60212, A60209, A60210, A60211, A93446, I09267, I09270, I09268, I09269, I09252, I09251, A27170, A39929, A83151, A95117, AR068508,

						AR068510, AR068509, AR054109, A48774, A29109, A32111, AR068550, A23373, AR068551, A48775, E01324, I08638, A94048, A94061, A70359, AR003585, AR038066, A83180, AR038321, AR038307, AR051652, A32110, X89399, AR067734, A64973, A83642, A83643, AR038320, AR038306, Z73920, E01239, E01561, AR064436, A92081, A92080, A92077, A92078, A92079, E01619, Z96705, I06159, E16475, AR055048, AR055051, AR055049, and AR012640.
HCHAR16	89	675465	1 - 216	15 - 230		AA594128, A1625342, AW057569, and AA808529.
HCHAR43	90	715128	1 - 446	15 - 460		AA459445, C18242, AC003036, and Y12781.
HCHAR67	91	665184	1 - 306	15 - 320		A1816095, AW402653, AA827700, AW449023, and AW444910.
HCHBQ03	92	923763	1 - 490	15 - 504		AL039087, AL037259, A91754, A49700, AR031375, A58521, AR020969, A44171, I56772, I95540, A63067, A51047, A63064, A63072, AR068507, AR068506, AR000006, AR015960, AR031374, AR018924, AR000007, AR015961, AR051651, A94046, A94054, I58322, I58323, E12566, E12564, A18051, I01012, E02455, AR067785, A00782, A14595, A18755, I12245, A92666, A92668, A92667, A18050, I77211, AR007512, A80476, A80477, A02741, I25041, AR027319, A91752, A91751, AR027318, I56770, I56771, A25856, A92665, A38214, Z73334, E16475, Z73920, A49701, A95274, Z96705, A00223, A00224, I70974, A80474, A31896, I63070, I63071, I63072, AR066336, I21924, I44104, I44103, A06633, I85513, I46976, AR067733, AR027100, I58669, I25027, I26929, I44515, I26928, I26930, I26927, I44516, AR009152, AR009151, AR027099, I07209, I07249, A63954, AR029417, Z96177, A93936, AR067731, AR067732, A60206, AR035224, A49045, A27169, X85060, AR016495, AR029418, A93446, I91969, A60212, A60209, A60210, A60211, I09267, I09270, I09268, I09269, I09252, I09251, A27170, A39929, A83151, A95117, AR068508, AR068510, AR068509, AR054109, A48774, A29109, A32111, AR068550, A23373, AR068551, A48775, E01324, I08638, A94048, A94061, A70359, AR003585, AR038066, A83180, AR038321, AR038307, AR051652, X89399, AR067734, A64973, A83642, A83643, AR038320, AR038306, A32110, A93445, AR038762, E01239, E01561, AR064436, A92081, A92080, A92077, A92078, A92079, E01619, I06159, AR055048, AR055051, AR012640, and AR055049.
HCHML32	93	668518	1 - 535	15 - 549		Z59318.
HCHND96	94	880585	1 - 592	15 - 606		AA872500, AI026825, AI023522, AA769674, AA446298, AA446025, AA435968, AA719152, AI826656, AA928442, AL043981, AA300900, AL043982, AA948304, AA961187, D45701, N71729, AI557254, N71226, C14208, AI525796, AI541218, AI557264, D51378, AI535873, and A84916.
HCHOA76	95	740102	1 - 488	15 - 502		AI963720, AW193265, AL046409, AI305766, AI345654, AA490183, AI431303, AA581903, AI284640, AI613280, AI281881, AA610491, AL042853, AW303196, AW274349, AI696962, AI355206, AW301350, AL138265, AI334443, AI270117, AI350211, F36273, AW419262, AI799642, AI570261, AW062724, AW407632, AI679782, AI754658, AA584201, AI801482,

				AL046205, AI192631, AI421841, AI589230, AW408717, AL138455, AI537506, AI890918, AW438643, AA649642, AI133164, AL037683, AL041690, AW406755, AI119691, AA482711, AA720702, AW029038, AW238278, AW276827, AI061334, AI962050, AI064864, AI110770, AI624142, AI634384, AW023672, AW270270, AI358229, AI118991, AW304584, AL044940, AI345681, AI345675, AI866856, AW083402, AA569471, AA587604, R24205, AI365988, AW407578, AW162049, AI929531, AI270559, AI623720, AI289067, AL042420, AI754253, AI341664, AW410400, AI890348, AW265393, AW073470, AI471481, AI339850, AI917271, AA523815, AA551503, AI696955, AI469968, AI956131, AA491814, AI625244, AL047427, AL120269, AI732865, AI076616, AL048626, AI357901, AA857486, AA623002, AI890923, AI254615, AI344844, AA469451, AI610607, AI610920, AW088202, AW265385, AI457397, AI887483, AA521323, AW249224, AI888518, AW193432, AI341548, AI368256, C75026, AA468022, AI801600, AW265009, AI538433, AA661948, AA665330, AI619997, AI149478, AI688846, N53150, AW103509, AI005388, AI133102, AL048925, C06327, AI305547, AI249997, AW261871, AI792287, AA613227, AI368745, AI375710, F28204, AI904894, AI859742, AI567674, AA877817, AI053623, AI679132, AI473943, AW088616, H71429, AL038785, AA630362, N48230, AA631507, H90814, AW166815, AA164251, AA177061, AA521399, AI885572, AI918421, AW272758, AI340453, C05755, AW080134, AA713815, AA52856, AL038606, AA679514, F29989, AI358501, AI732764, AA613345, AI345518, AA491284, AA610493, AI144055, AA846935, AA394271, AW072587, AI053672, AW440836, AW265170, AI628288, AA828704, AA503258, AI744995, AI307608, AI471534, AI687343, AI291124, AW439558, AI708009, AA525790, AW339687, AI110760, AI376100, AI683577, AI921649, AW104748, AA594145, AI568678, AI860020, AW243960, AA503015, AI251436, AI469624, AW072923, AI471543, AW270716, AW242109, AL079645, AA350859, AI267818, AL119649, AA826303, AA584489, AI623898, AI085719, AW270382, AA134367, AW238583, AL109985, AC005234, AF015152, I51997, AF077058, AF015147, X55925, AF015148, U18391, AC004687, X53550, AF015149, U57007, D83989, X75335, AC005844, AC004257, U57006, AF015156, U18395, U02531, U18392, U57009, U18394, U57005, AF015153, U18390, AF015151, U57008, U18393, AF000556, AF015157, AC004491, X55926, X54180, U18387, X55924, AC002470, AC004134, AC005280, U02532, U69569, X54175, X54181, X54178, X55931, AL035587, Z98200, AC007367, AC007308, AL031295, AC007785, AC016830, X54176, X55922, M37551, AC004596, AP000143, U57004, X54179, AC008101, AC006998, AC005257, AL121653, AL024497, AC004263, U67801, AC002456, AC006213, AL008629, AL132642, AC004876, AL031276, AC004773, AF015167, Z49816, X55923, AC007637, AL031729, AC005484, AL121825, AC002128, U18400, AB023049, AC005755, AC008079, AF042090, AL035071, AP000557, AL021366, X54177, Z22650, AC004675, AC004475, AC007450, AC005011, AF196779, AC005015, U91321, AL050332, AC005180, AF085913,
--	--	--	--	---

					U67221, AL049776, AP000090, AL035451, AF088219, AC003957, AL021808, AL031848, AC009223, AC008119, AL022322, AC006274, AL132992, AL096712, AL031005, Z83819, AL031681, AL021393, L47228, U07000, L48038, AP000302, U47924, D87675, AC005971, AC005682, AC005360, AF015155, U12580, AL035415, AC005747, AC004752, U12584, AL109798, AC009516, AL035446, AC002059, AC005696, U18399, AC004947, AC005520, Z99758, AC004682, AC007043, Z83840, U73479, AC006352, X55927, AF015166, AL031542, AC008039, AC006511, U67229, AB023052, Z93023, AL031123, AC003043, AC002543, AF109907, AC006449, AC004941, Z93930, AP000114, AP000046, AP000359, AF015154, AC004526, AL022724, AL031965, AF107885, AC002041, AP000553, AL133233, AP001172, AD000684, AP000348, AC004987, AL035079, AC000026, U95740, AC005379, AC006479, AF111170, AC005081, AC004087, AC004858, AL132987, U67231, AL023882, AL121603, S75201, AC005324, AP000513, AL022323, AL021918, AC005193, Z97053, AJ003147, AC005610, AC000075, AF015162, S43650, AF015158, U62317, AC002094, AC006071, AC006128, X55930, AC004041, AL021939, AL078477, AC002549, AC004092, AC005681, AC006211, AC003024, AL022332, Z99129, AC006468, AJ010395, AC002350, AP000161, AC004796, X55932, AL023575, AF045555, AC005057, AC004862, AC007688, AL031224, AC005664, Z73988, AP000512, AC003684, AC022517, AC009069, AL049562, AC005632, AC004111, AL050347, U62293, AL117352, AC006138, AD000092, Z86061, AL022311, AL008720, and U18398.
HCHOD89	96	934866	1 - 202	15 - 216	
HCHPO55	97	717671	1 - 116	15 - 130	
HCHQB06	98	934941	1 - 490	15 - 504	
HCMSE07	99	927904	1 - 1366	15 - 1380	AI569831, AI798887, AI209013, and AW300115. AI681115, AI672348, AW173697, AI565451, AL079990, AW305215, AA115462, AA148788, AW081450, AW020072, AI088661, AI051834, AA243692, AA031780, N44611, AI610893, AI469307, AI094153, AA115214, AW130820, AI970462, AA233114, AI620951, N34679, AA115204, N69772, AA495921, AA987696, AA495922, AI079994, AI050072, AI434100, AW236674, AI770044, AA961227, AA115067, AA150297, AI039432, AI873440, AA938897, AI301357, AA603790, AA326653, AA910225, AA031879, AA377521, AI702644, AI913596, AA961701, AW452143, AI352693, AI381836, AI767254, AI247300, AA573940, AA081742, AI830541, AI493755, AI865675, R37287, AA937056, AI648373, AA653705, AI266405, AW138034, Z41281, N85358, AI090946, N84377, AI612953, F08269, AI572322, T49708, AW103627, AA364595, D25919, T49717, T49709, AA094410, AA385800, AP000300, AP000113, and AP000045.
HCOMZ41	100	932878	1 - 347	15 - 361	AA863389, AI695443, AI969882, AC006512, U47924, and AA863395.
HCOOG04	101	925748	1 - 104	15 - 118	AI922923.
HCOOI07	102	931665	1 - 710	15 - 724	

HCOOM77	103	969161	1 - 502	15 - 516	AI913553, AI418464, AA299849, AA729782, AI547277, AC005005, and AC000403.
HCOOX10	104	961595	1 - 556	15 - 570	AI350354, AI904299, AI902503, D61534, I78554, AW183962, AI218626, AW304978, W74167, AI081779, AI022238, and AI137499.
HCOOZ11	105	965306	1 - 689	15 - 703	T63995, and AI669879.
HCOPP18	106	954332	1 - 651	15 - 665	AI554514, AW117613, AA401269, AA894442, AI923609, AA968468, AA779787, W56250, AI049682, AI342711, AI277156, AA424469, AA443257, AW023482, AI978942, AI611714, AI132777, and AB024689.
HCOQE11	107	965299	1 - 825	15 - 839	AA683227, H65257, Z99396, AW392670, AW372827, AL119497, AL134531, U46341, AW384394, AL119457, AL119483, AL119418, AL119324, AL119522, AL119319, AW363220, AL119396, AL038837, AL119484, AL119391, U46350, AL119341, AL119443, U46349, AL037051, AL036725, U46351, AL119335, AL119363, AL119355, AL119496, AL036418, AA631969, U46347, AL043029, AL042989, AL119401, AL134920, AL134533, AL036924, AL042970, AL119488, AL119439, AL042965, AL134528, AI142139, AL042975, AL043033, AL119444, AL043011, AL037205, AL042614, AL036858, AL134538, AL042984, AL042544, AL042542, AL043019, U46346, AL043003, AL043037, AL042551, AL042896, AL042850, AL042995, U46345, AL037094, AL036268, AL036190, AL037639, AL036196, AL037526, AL037085, AL036998, AL037082, AL038447, AL037615, AL036733, AR066494, AR060234, A81671, AR023813, AB026436, AR064707, AR069079, and AR054110.
HCOQH12	108	969151	1 - 551	15 - 565	AI678080, AW118890, AI962969, AI936455, AL037402, AA969064, AI127304, AI677882, AW195711, H19013, N33206, AI127565, AI332958, AI089991, AI253076, AW051831, AI025225, AI004194, AI873265, AW182432, N48995, AA528395, AI290549, AI003987, AA022465, AI377431, H81787, AA225942, N44742, H19307, W25684, AI246674, N95594, H81786, Z42919, R52370, H98158, AI382954, Z43457, AI244671, AI093458, AI042622, R52369, R73912, W20350, Z39530, AA022998, C04474, W92421, R74008, F02397, N92731, AA934795, AA502534, AW081759, H98461, AA744985, AA883984, AA319261, AI619688, AL079491, N45717, and AA662787.
HCOQQ07	109	951658	1 - 424	15 - 438	AL043767, AA043579, and H42377.
HE8SG46	110	961388	1 - 2631	15 - 2645	AW452627, and AC009248.
HEAAA42	111	963100	1 - 260	15 - 274	AI910578.
HEAAB77	112	574510	1 - 348	15 - 362	
HEAAK46	113	574232	1 - 259	15 - 273	
HEAAM16	114	574008	1 - 338	15 - 352	
HEAAM52	115	960579	1 - 427	15 - 441	
HEAAN18	116	932383	1 - 251	15 - 265	
HEAAQ66	117	653242	1 - 389	15 - 403	
HEAAT36	118	531348	1 - 476	15 - 490	R90939, H66735, and R89394.

HEAA60	119	733632	1 - 459	15 - 473	AL137566.
HEAAV10	120	968200	1 - 347	15 - 361	AL031178.
HEAAV33	121	574508	1 - 436	15 - 450	W79572.
HEDAE67	122	752875	1 - 133	15 - 147	
HEEAD64	123	741305	1 - 328	15 - 342	AI041541, and AC006116.
HBEAH07	124	851219	1 - 329	15 - 343	AI343204, R92902, AW138732, AC011331, AL137469, AB007899, Z84480, AP000228, AP000140, U95090, AP000078, AL050067, AC010168, AC004741, AC002426, AC005668, AL022164, AC005034, AD000685, AL035701, AC005307, AC005067, AC005572, AC003663, AC007056, AF099810, AC004472, AF061779, AL022399, AC000025, AC005527, AL022238, AC005529, AC005280, AP000088, AC007298, AC004964, AC002991, AL021026, AC002287, AF181449, AL008725, AL118516, AC006271, Z94044, and AL031985.
HBEAJ58	125	785121	1 - 340	15 - 354	AA206618, AA204795, W38480, AA431939, AA587180, and AF080470.
HBEAJ76	126	887321	1 - 535	15 - 549	AW088322, D80133, D80522, D80248, D80251, C14389, D51060, D81026, D59610, D51022, D80366, D80188, D59859, D51423, D80166, D59619, D80210, D51799, D80240, D58283, D80253, D80241, D81030, D80269, D50979, D80024, D80212, D80195, D80043, D80022, C14331, D80219, AW377671, D50995, D59467, D80391, D80164, D59275, D59787, D80227, D59502, D57483, D59889, D80196, AA305409, AA305578, D59927, C15076, D80038, D80193, C06015, D80045, C14014, D80378, D80268, D59373, AW177440, AA514186, AA514188, D80439, C14429, AW360811, AW178893, D80302, D59627, D80247, C75259, AW178983, T03269, AW375405, AW179328, AW378532, D80258, C05695, AW366296, AW360844, D58253, AW360817, D80132, AW375406, AW378534, AW178906, D51759, AW179332, AW177501, AW377672, AW179023, D80157, AW178905, AW177511, D80134, D51103, AW178762, AW378528, D51250, T11417, AW176467, AW352171, AW377676, AW352170, AW360834, AW177731, AW178775, AW178907, AW369651, AW179019, AW179024, AW367967, AW352158, AW177505, AW360841, AW352117, AW179020, D59653, AW178909, AW177456, AW179329, D59503, AW178980, AW178914, AW177733, AW178908, AW178754, AW179018, T48593, D51213, D81111, D80064, AW378525, D51079, AW179004, AW178774, C14227, D45260, AW179012, AW352120, AW352163, T02974, AI910186, AW352174, AW378543, AW179009, AI905856, H67854, C14407, AW177728, AW178911, AW378540, AW177722, D58246, F13647, D51221, AW367950, H67866, AA514184, C03092, AW177508, AA809122, AW178781, Z21582, D80228, AI525923, AW177497, AI535850, D60010, AI525917, D80014, AI557774, AW178986, D59474, T03116, C14957, C14298, AW177723, AW179011, D59317, AW378533, C14973, D58101, D45273, AW378539, AI525920, C14344, T03048, D50981, AI525235, AI557751, AW177734, D80168, AI525227, AI535959, AI535686, AA285331, D59551, AI525912, D51097, C14046, D60214, AI535961, D52291, AI525215, D80949, AW378542, AI525242, AI525925, AI525222, D59695,



					C16955, C05763, Z33452, AW360855, H67858, AI525237, D51053, C04682, Z30160, T02868, A62298, AR018138, AR008278, AJ132110, A84916, A62300, AF058696, AB028859, A82595, X67155, Y17188, D26022, A25909, AR060385, Y12724, A67220, D89785, A78862, D34614, AB002449, A94995, D88547, AR008443, I50126, I50132, I50128, I50133, AR066488, X82626, AR016514, AR060138, A45456, A26615, AR052274, AR016808, Y09669, A43192, A43190, AR038669, AR025207, AR066487, A30438, I14842, AR054175, D50010, AR066490, Y17187, I18367, AR008277, AR008281, A63261, A70867, AR008408, AR062872, AR016691, AR016690, U46128, AB012117, D13509, A64136, A68321, AR060133, X68127, I79511, A85396, D88507, AR066482, A44171, A85477, I19525, A86792, X93549, U79457, AF123263, AR032065, and AR008382.
HEEAK22	127	673904	1 - 312	15 - 326	
HEEAK84	128	780838	1 - 293	15 - 307	
HEEAL31	129	887312	1 - 333	15 - 347	AC004549.
HEEAN24	130	676721	1 - 335	15 - 349	AL137566.
HEEAS58	131	735620	1 - 496	15 - 510	
HEEAU79	132	706935	1 - 430	15 - 444	
HEEAW01	133	851213	1 - 372	15 - 386	H64999, and AC011311.
					AA368329, AI281622, AA935827, AA581317, AI350189, AW177224, AI859906, AI039257, AA385094, H29593, F35789, AI267450, AI267356, AI245693, AA493533, AI668566, AA364199, AL039515, AW151848, AI733523, AI732911, AI336771, AA614647, AI338575, AA354695, H48017, R70883, AA736713, AI249688, AI982994, AA197089, AA496941, AI671077, AL040360, AA834798, AI038304, AW023975, AA354677, AI003391, AI754567, AI569100, AW192599, AI754105, AI755214, R70884, AA351893, AI080307, F23268, AA813203, AA456149, AA525332, AA557945, AA077637, AA533660, N55076, AW301855, AA504951, AI342863, H65213, AI459879, AW089395, AA155817, AA363311, AI270280, AI624038, H43183, AI905494, AI859744, W61253, AI791227, AL041681, AL041682, AA847341, AA522864, AA601378, AA077247, T10579, AL047645, AA579082, W69639, AA878492, AA132445, AI791659, AW303822, T07013, W28786, AA715508, AA126475, AI690520, AW167202, AI114645, AI370470, AA664924, AI884404, AA678616, AL039761, AW265688, AA653291, AW026282, M78137, AA598605, AI749306, AA524846, H94979, AA809104, AI821945, M77964, AA584525, AI468993, AI285651, AI708108, AI207534, AA449468, AA831801, H96919, F00937, AA745628, AI018726, AA467740, AW265484, AI016192, AA133293, AA825954, AI734119, Z94054, L78833, AC004447, AC008044, AC006210, AL121748, AC005678, AC005537, AC005828, AP000255, AC004158, AL132987, AP000135, U91321, AP000031, U96409, AL133241, AC007371, AC006211, AL049781, Z99291, AL031291, AL031685, AC005527, AC005632, AL137100, AP000558, Z82208, AC005074, AC005412, AC005180, AC002990, AC005529, Z82193, AF002223, AC004383,

					AC004673, AF095725, AF196969, AC005015, AL023574, AL008718, AJ251973, AC007687, AC005599, AC006121, AP000502, AC006120, AC005695, U91325, AC006487, AL031848, AL035455, AC003108, AL049776, AL049699, AC004417, AL022165, AC005696, AC009516, AF052041, Z69721, AC002492, AL022316, AL035684, AC007686, AL139054, AC003663, AC006511, AC002045, AC004815, AL031053, AC004230, AC006111, AC004834, AF205588, AC004486, AC005089, AC004870, AF217403, Z68331, AC007387, AC004655, AL031657, AC002395, AC005325, AL031287, AC005746, Z93024, AL035588, AC007096, AC004098, AL117338, AC004687, AC002301, AC002288, AP000094, AC005300, AC005231, AC007207, AP000010, AC003037, AP000555, AF030453, AC000049, AC009275, AC008154, AC006071, Y18000, AL035587, AC019014, AC006204, AC004682, AC005808, AC002430, AC005088, AC006948, AF053356, AL020996, AC000111, AC005971, AC005184, AC002302, AP000213, AP000305, AC006312, AL031432, AC005261, AL049760, AC007384, AC004854, Z98051, AC007563, AC005324, AB016897, AL121580, AC005280, AC006079, AC009399, AC007238, AC007676, AL034423, AC005606, AC007435, Z98745, AC004771, D87012, AP000047, Z98742, AL050307, AC007367, AC006023, AP000355, AC004263, AL049780, AC003025, AL096757, AL049872, AL031767, AC005821, AC005751, AC004890, AC005914, AL118497, AC004760, AC005856, AC004900, AL031659, AC002072, AL035706, AC005874, AF134471, Z84497, AC004242, AC004542, AC005694, AC005747, AL031680, AL031311, AC004081, AC006020, AL008630, AF001549, AL031295, AC006017, AL133500, M92069, AF139813, AC005081, AC008282, K03431, AL031984, M69197, AP000115, AP000692, AC004686, AC005544, AP000030, AL020997, AL033527, AC007666, AC007240, AC009028, AF200465, AF196779, AC004004, AC004883, U82668, AC006254, AC002350, AC006088, Z70224, U95742, AC006455, Z97055, AC004762, AF126403, AD000833, AL049591, AP000152, AC004106, AL033397, AL031588, AC006132, AL034553, AC005722, AC004099, AC002299, AL022398, AL009179, AC003013, AC004975, AL049761, AC004228, AC005702, AL109963, AC007277, Z82176, AL021368, Z95115, AC008056, AC005399, AC004882, Z95116, AC007216, AC004812, AC004491, and AC005519.
HEEAW13	134	656299	1 - 357	15 - 371	AC005344.
HEGAA24	135	676716	1 - 407	15 - 421	AC005324.
HEGAA73	136	767284	1 - 411	15 - 425	
HEGAB84	137	823900	1 - 339	15 - 353	AI222155, and AC007040.
HEGAC69	138	754344	1 - 600	15 - 614	W21047, and AW364581.
HEGAC95	139	965183	1 - 584	15 - 598	AW275380, AW273693, AA102550, AI589713, AA515679, AA931215, AA069905, AA661692, AI361672, AI500209, AA025822, AA447097, AI249434, AA833996, AI086891, AA342066, R41926, AI005214, AI376215, AA992138, R37636, AW129954, AA039651, AI986034, AI358677, R39054, AA428629, AI274337, AI352529, AI768472, T78443, AI125818,

HEGA182	140	955291	1 - 594			AA977410, T91051, AI828094, AI675983, AW248442, and AI681656.
HEGA04	141	887299	1 - 502	15 - 608		AI624142, AW393412, M62051, AI870044, AA330088, and AB014538.
HEGA083	142	780837	1 - 314	15 - 516		AA707670.
HEGAP06	143	934705	1 - 636	15 - 328		AR064011.
HEGAP31	144	697419	1 - 454	15 - 650		AI813699, AW051520, AI312608, AI338779, AI369324, AI218925, R72618, R80387, R72688, R80493, AA928026, R63885, AI298652, R63884, and AI214650.
HEGAP36	145	706951	1 - 536	15 - 468		U73167, and U90094.
HEGAR53	146	719387	1 - 669	15 - 550		
HEGAY32	147	699906	1 - 182	15 - 683		H83841, AA019657, and AI127286.
HEGAY52	148	726316	1 - 190	15 - 196		R55547, H12557, H27260, H00825, R23780, AA747653, H12800, T50030, H42368, and AW361580.
HEGAZ61	149	950033	1 - 547	15 - 204		AL137660.
HEPAA44	150	509456	1 - 313	15 - 561		X66139, and X66140.
HEPAB70	151	557149	1 - 341	15 - 327		AA335025, and AA335496.
HEPAD09	152	888726	1 - 268	15 - 355		
HEPAD40	153	509002	1 - 254	15 - 282		AA335537, AA336174, AA335376, AW406878, AI541216, AI525220, AI525710, and AI022318.
HEPAD82	154	509452	1 - 185	15 - 268		AA335399, and AA335663.
HEPAJ70	155	586843	1 - 61	15 - 199		AA335412, AA335243, AA335606, and AA507007.
HEPAK01	156	518331	1 - 297	15 - 75		AA335523, and AA335948.
HEPAK41	157	925146	1 - 571	15 - 311		AA335526, and AA347833.
HEPAM29	158	508706	1 - 389	15 - 585		AA524859, AI366999, AW274554, AW085032, AA897153, AA335550, AA405462, and AW305246.
HEPAN19	159	508694	1 - 395	15 - 403		AA335591, and AA335639.
HEPAP02	160	926914	1 - 351	15 - 409		AA335593, AI247347, AA335892, AI700468, AI014987, AA629210, AI700878, and X66139.
				15 - 365		T31859, AI452722, AI810976, AA039492, AW166142, T34621, AA887990, AA526699, AI491944, AI291744, AA971270, AI291429, AI147212, AI191377, AI282167, AW194181, AI382209, AI819092, AI125991, AI291350, AA635803, AI076763, AI025483, AW054812, AW026209, AI872247, AA446939, AA393844, AA595299, AA588205, AA635837, AA580350, W42714, AA652370, AI205639, AI346541, AI299347, AA618584, AA041546, AI1903326, AI589781, AI038728, AA747482, AI374991, AI186987, AI272049, AA968514, AA781105, AA719399, AI745517, AI479431, AW005070, AI760672, AI828575, AI653887, AI983727, AI950052, AI681964, AA953968, R60201, AW001576, R43919, AI568018, AI445351, R88422, HI4119, AI588901, T67080, H20066, Z38557, AA069378, N95318, H19689, R88071, AA069325, AW340398, AA532555, AA742707, AI095816, AI261987, T31864, AA224332,

					AI089055, AI192912, T29995, AI690936, AA490233, AA425662, AW178914, H52718, AW178908, AI198749, AI277302, AW178907, N75536, AW178911, AI336808, AW178912, AW050516, N91860, AW178906, AI354778, H19688, AI925482, T31898, AA308975, AA393826, H19728, AW439026, AA362297, AA308974, AA427787, AW178913, AA375056, AI028636, AI281040, AI955663, AA350360, AI372759, AA328758, AA223799, W23910, R88070, AA536032, U79457, and AC005041.
HEPAP12	161	968771	1 - 298	15 - 312	AO1447, and E00237.
HEPAS44	162	884083	1 - 371	15 - 385	AA335822, AA335497, AA605142, AA493490, and AC005042.
HEPBA39	163	919875	1 - 696	15 - 710	AW291560, AA335715, AA897741, and AI559166.
HEPBB24	164	508684	1 - 206	15 - 220	AA335914, AA335921, and AA335993.
HEPBB60	165	855597	1 - 351	15 - 365	AA335668, AA336011, AA335983, and AA335973.
HEPBG26	166	967921	1 - 344	15 - 358	AA336199.
HEPBG35	167	508686	1 - 221	15 - 235	AA335799, AA336205, and AA653622.
HEPBH28	168	508673	1 - 390	15 - 404	AI208794, AA336191, AA150459, AI620599, and AC003090.
HEPBH38	169	707524	1 - 325	15 - 339	AA335435, AI078409, AA384480, AI635196, AI445373, AA515224, AA363957, AA551548, AI793032, AF053356, AF111167, AC006511, AC004106, AP000044, AP000112, AF001549, D00596, AC005531, AI080241, AC002310, AI049694, AC005043, AI049643, AI034421, AC002350, AI022334, AI133243, AC004770, AC009225, AC005231, AC005031, AC004134, AP000475, U80017, AI049569, Z82206, AC004000, AC007358, AC002400, AB002325, AC005618, AC005730, AI049745, AF176815, D88268, AC005632, AC006137, AC002126, AD000812, Z82190, AI035460, AC004223, AC002477, AI050318, AC005071, AC004692, AC004531, AF060568, AC007055, AF015262, AJ229043, AC005261, AI022322, AC004675, AI133245, AC001228, Z93023, AC005529, AI121973, AF134726, AC006965, AC006285, AI008718, Z49236, Z99943, AI035086, and Z93930.
HEPBH45	170	508696	1 - 312	15 - 326	AA336047, and AA335600.
HEPBO69	171	888697	1 - 335	15 - 349	AA335535, AA335244, AA335394, and AC004464.
HEPBQ47	172	713836	1 - 327	15 - 341	AA336176, AW204786, AI094626, AW246712, AI935606, and H92959.
HEPBQ69	173	888693	1 - 448	15 - 462	AA335278.
HEPBS10	174	968665	1 - 391	15 - 405	
HEPBX43	175	715685	1 - 431	15 - 445	AI827693.
HEPCD36	176	523670	1 - 285	15 - 299	AW377642, AI763257, AI828957, AW206245, and AW237541.
HEPCE25	177	529343	1 - 202	15 - 216	AI034548.
HEPCO59	178	761094	1 - 150	15 - 164	AI198719, AI381368, AI695853, AI620570, AA564802, and AA456099.
HEPCT32	179	947081	1 - 843	15 - 857	AA913839, AA429491, AA428554, AA724454, AA868848, AA336014, AI190145, and AI125345.

HEPCU32	180	931824	1 - 1512	15 - 1526	H83516.
HEQAE65	181	911438	1 - 148	15 - 162	AL044222, AJ007558, AB018334, and AF165926.
HEQAH70	182	699690	1 - 344	15 - 358	AL046469, AI962060, AF053944, AC006454, E07353, and AF053943.
HEQAO76	183	769973	1 - 422	15 - 436	T85314, AI360684, T91254, T85528, and T87321.
HEQAZ52	184	727051	1 - 745	15 - 759	AL039872.
HEQBA41	185	712243	1 - 685	15 - 699	AA336507, AA336418, AP001042, AP001043, and AF017257.
HETAD29	186	509311	1 - 254	15 - 268	AA338023, AA336535, and AC002357.
HETAF20	187	509308	1 - 331	15 - 345	R10452, R02534, AA336773, AA336549, R00052, AA704817, AA678320, and AI248957.
HETAF49	188	509306	1 - 500	15 - 514	AA336405, AW248106, H24100, AW247283, AF161459, and AL110193.
HETAF89	189	509300	1 - 234	15 - 248	AA337683, AA336632, AA157672, AA157671, W32894, AA359882, AA706316, AA385464, AA873028, AI961281, AW177658, and AD001502.
HETAH16	190	942612	1 - 335	15 - 349	AA336517, AA336751, AA337580, AA336640, AA337190, AA336988, and AC005858.
HETAH66	191	799665	1 - 352	15 - 366	AA336641, AA337920, and AA336746.
HETAH67	192	535390	1 - 304	15 - 318	AA337221, and AA336756.
HETAJ26	193	508994	1 - 241	15 - 255	AA336844, AA442492, AA394009, AI061614, AW327292, W76580, AA337096, N39773, AA287514, AA022944, AA355038, W16809, AA306378, W16892, W20041, AI038286.
HETAK75	194	518156	1 - 315	15 - 329	AA902825, AA431265, AI128035, AA437055, AA442618, H69650, AA333960, W16816, AA471293, AA429690, N39663, T81379, N42264, AW298810, AI582147, N95146, N28024, AA806403, AA181314, AA092603, N24270, N25823, AI206546, AI347368, AI093178, N26593, AI290898, AA676717, W16976, AA758626, AA846456, AA838697, N57221, N40080, AA927961, AA769954, AA729656, AA962149, AW118695, AA435600, AI187055, AI348195, AI223403, AA939313, AA282421, AA659796, AA640163, AI207323, AA436689, AA436861, AA437321, AA767427, AA807555, AW168756, N66030, H80473, N89586, H59458, AI292018, AW151976, D62144, AI887826, AI097028, N30575, AA831986, N89608, AA187056, N56324, AW137724, N27143, AA043993, AA740443, H98703, AA834618, AI269239, AA586548, AI393728, AA022924, AA989305, AA782538, AA287386, AA769511, AA255992, N26891, N67380, AI570699, H70497, H70481, and N89574.
HETAN20	195	535359	1 - 345	15 - 359	AA336957, AA336982, and AA336981.
HETAP59	196	509118	1 - 291	15 - 305	AA336978, AA337032, AA337033, AA279029, and AL133312.
HETAP94	197	960392	1 - 307	15 - 321	AA336825, AA337256, AA337682, and AA337525.
HETAR06	198	960839	1 - 301	15 - 315	AA337121.
HETAR60	199	934444	1 - 296	15 - 310	AA337135, AI376239, AW405016, AW392584, AA782301, AL047643, AI061313, AA741301, AI557271, AA364567, AA412065, AL078581, AC004024, Z93023, AC004841, AC004991, AC004019, AP000555, AC005288, AC002094, Z83820, AC006538, AL049557, AC000085,

							AC004983, U91323, AP000228, AP000140, L29074, AC005844, AC004859, U95737, AC007429, AL022476, AC005058, AC003956, AL096776, AC004861, AP000088, Z83844, AC002350, AP000076, AC004854, D87001, D88268, AL022394, AC005746, AL022397, AC004467, AL022326, AC002477, and AC016831.
HETAT83	200	918730	1 - 797	15 - 811			AA337275.
HETAZ13	201	536192	1 - 313	15 - 327			AA337464, and AA298457.
HETBA01	202	509189	1 - 225	15 - 239			AA337530.
HETBF45	203	508655	1 - 318	15 - 332			AA337559.
HETBH48	204	720853	1 - 298	15 - 312			AA337853.
HETBR25	205	509099	1 - 482	15 - 496			R87344, AA338031, and AW155642.
HETBW39	206	523046	1 - 334	15 - 348			
HETCE12	207	971505	1 - 674	15 - 688			AA878439, AA337500, R11423, R05601, AA337219, AW373556, and AC005876.
HETCE55	208	508666	1 - 444	15 - 458			H47564, AA336636, and AA336635.
HETCG63	209	841924	1 - 1765	15 - 1779			AA336411, AA319330, AA337238, AA337599, AA337742, AI709289, W24609, AA308045, AI659881, AI803103, AW236950, AA336555, AW242783, AA630205, AA516061, AA337527, AA336474, AA782919, AL021878, AC005630, AL078475, AC006023, AL133371, AJ239329, AC007204, AC005574, AC005908, AC002485, AC004055, Z83820, AC004074, AL031432, AC006539, and AC004381.
HETCH92	210	921390	1 - 244	15 - 258			AA337969.
HETCL55	211	522829	1 - 406	15 - 420			AW301200, and AI057175.
HETDA81	212	525412	1 - 425	15 - 439			AJ347829, AI539038, AI164850, AI862333, AI208103, T91042, W87820, AW103512, AA164851, AI538025, T83877, AI557283, AI673742, AA827331, AI565180, AI827139, AI590154, AA780419, AA551005, AI022058, AI886882, AI963604, AA164745, AC006047, AP000509, AC009542, AC009330, D84394, AL080317, Z97876, Z98750, AC004185, AC005023, and AF058907.
HETDD18	213	509110	1 - 425	15 - 439			AA337063, and AB020858.
HETDE67	214	883018	1 - 352	15 - 366			
HETDE86	215	855509	1 - 384	15 - 398			AA337665, AI818119, AA337827, H55651, AC002051, AC002054, AC007664, AC008018, and AP000550.
HETDG67	216	960870	1 - 645	15 - 659			AA337226, AA336474, AA460382, F35658, F28539, AA634465, AI963222, AI674747, AA337527, AA336555, AA336411, and AI709289.
HETDI03	217	925489	1 - 145	15 - 159			AL049650.
HETDL92	218	508990	1 - 260	15 - 274			AA337546.
HETDN90	219	695021	1 - 257	15 - 271			
HETDP21	220	525407	1 - 281	15 - 295			

HETDT15	221	660714	1 - 788	15 - 802	N99226, N50058, AI709289, N66257, AI333306, AA999709, R16250, AI218967, AI201148, AI754092, AC004150, AC006539, AC007204, AC006024, U82672, AC005592, and AC004381.
HETDW59	222	827093	1 - 278	15 - 292	AA337353.
HETEB68	223	917400	1 - 257	15 - 271	
HETEQ16	224	952297	1 - 259	15 - 273	
HETEZ43	225	529591	1 - 347	15 - 361	AL034400, and AF030186.
HETFA40	226	523112	1 - 464	15 - 478	AL021920.
HETFC82	227	799658	1 - 530	15 - 544	AL121162, AI684248, AW371221, AW371225, AW371199, AW371191, AW371187, AL035291, AJ250075, Z96050, and AF097535.
HETFE48	228	974351	1 - 696	15 - 710	AL035982, AI564005, AW074802, AC006062, AC007461, AL031223, AF074903, Z86064, AC005189, AL022159, AC006369, AC004787, AL049831, AL122007, AC006101, AF001552, AL109653, U73642, AC003002, AC006265, AC006972, AC002990, AC006305, AC006354, AC007486, AL008633, AC004382, AC005799, and AL031666.
HETFG29	229	795274	1 - 958	15 - 972	AL045331.
HETFI24	230	954104	1 - 1193	15 - 1207	AI687645, AL046701, AL041179, and AB011137.
HETFI81	231	523398	1 - 349	15 - 363	
HETFL39	232	973697	1 - 532	15 - 546	
HETFM43	233	973702	1 - 399	15 - 413	N71545, AA019707, AW301855, AI560119, AA456149, AA503144, AI749306, AA056206, AA747375, AI125615, AL110391, T47613, AA826144, AA843450, AA828851, H94871, AW085794, AI890857, AA488111, AA284179, AA747480, AA077637, AA173334, AA747276, AL096775, AC005722, Z99716, U85195, AE000658, AC005037, AL135744, AC004973, AF001548, AL008716, U15422, AL022326, U91321, AC004595, AF196779, AC005921, AC005514, AL031687, AC006441, AL021391, AC007227, AL035588, AC008080, AL132992, AC000070, AC005778, AC005409, AC004878, AL050312, AC005600, Z81369, AL139054, AC002364, AC009247, AC006390, AC000082, AL021154, AP000512, AL035417, AL079295, AL031670, AL096712, AC005829, AC007021, AC004953, AC004890, AC002115, U89337, AC005320, AC005043, AL109984, AC006449, AC002090, AC006211, Z83844, AL135960, AJ131016, AC005996, Z82194, AC004797, AL009179, AL034400, AC007243, D26535, Z69709, Z81367, AC007207, Z99916, AC004517, AC005772, AL121578, AC006146, AC005940, AL078638, AP000692, Z97630, AL035086, AC002565, AC006511, AC002996, AC005191, AL034429, AC007436, AC004134, AC006530, AC002525, AL049830, AC005049, Z82198, AL021407, AL031774, AL049611, U95740, AL031005, AC005094, AL008719, AF053356, AC004913, AF052684, AC004955, AP001054, U78027, AL020995, AC005200, AL034420, AL050318, AL035460, AC006001, AL080243, AL031848, AC005104, AC006581, AC006536, AC002477, AC003047, AC009263, AC006116, AC007790, AL049557, AC007057, AC003982, D00591, AC006017, AF111167, AC004707, D89927, AP001052, AL133485,

					AL133448, AP000552, AL021878, AC007386, AL021937, AC005924, Z73359, AC004832, AL034424, AC005874, AF134471, Z86090, AL035072, AP000350, AF001549, AC005088, AC003663, AC000385, Z83826, AC006285, AC008040, AC011504, AC006312, AC007688, AC007055, AC004531, AC005082, AD001527, AC005261, AL132777, AC005480, AF015416, AC007917, AC007435, AL132826, AL009181, AC006071, AC005015, AC005747, AL031295, AC005366, AC004526, AL022318, AL033504, AC005488, AC005914, AC005399, AC018769, U07563, AC004783, AC004791, AP000140, AC004805, AC005533, AC005215, AL022721, AL031280, AL021939, Z94721, AL022718, AB000882, AC004477, AL031289, AL035422, AP000346, AP000563, AC004554, AC005071, AL023799, AP000359, AC007421, AL035420, AP000558, AL035415, AC003101, AL035249, AL132712, AF200465, AC005325, AL049631, AC005695, AC005562, and AC007387.
HETGH30	234	527929	1 - 114	15 - 128	AC007655.
HETGI40	235	505383	1 - 51	15 - 65	
HETGL62	236	523372	1 - 316	15 - 330	AA857229, and AW207714.
HETGL74	237	947978	1 - 598	15 - 612	R30743.
HETGN20	238	927789	1 - 748	15 - 762	AA524918, AA524934, AW177242, AW177240, AW177241, AW177236, AW177243, AW177239, AI380737, and AW176018.
HETGQ76	239	542486	1 - 177	15 - 191	
HETGS09	240	969632	1 - 160	15 - 174	
HETHD30	241	935175	1 - 521	15 - 535	AA333629, AA380902, AA172147, Z55371, Z60082, Z57905, and AL023755.
HETHS6	242	974348	1 - 245	15 - 259	
HETHH49	243	967737	1 - 627	15 - 641	
HETHO63	244	745503	1 - 585	15 - 599	H85494.
HETHO78	245	963592	1 - 648	15 - 662	U59298.
HETHR24	246	851412	1 - 448	15 - 462	AA296378, and AA298030.
HETHT53	247	974555	1 - 427	15 - 441	Z69905, and AL049750.
HETIF01	248	966185	1 - 209	15 - 223	AA585101, D57491, Z28355, AA585155, AA585476, AI546999, AA585098, D61254, AI541365, R29445, C16300, C16305, AI525556, AI541374, AA585439, T11028, Z30131, AI546875, AI525316, AI526184, AI546945, D55233, AI525431, AI547039, AI557262, AI541523, AI526140, AI557731, R28735, AI541205, AI541535, R29218, AI540967, D57186, AI536138, AI525306, AI526194, AI557734, D61185, D53447, AI535660, AI557727, AI557787, AI535639, R45895, AI557740, AI541307, AA585356, AI557807, AI546891, AI541013, Z32822, AA283326, AA170832, AI525320, AI526073, AA585329, AI557084, AI526176, C16293, R28892, T41289, AI557763, AA585453, R28895, AI557799, D53161, R28965, R29177, D60765, AI556967, C16292, C14723, R28967, AI526187, AI541514, AI546828, D59751, AI546996, C15069, AI541510, AI526113, D54897, T18597, AI541508, AA174170, AI546855, AI541534,



D60844, AI541517, AI541346, AI547250, AI526180, AI557808, C15120, AI5255339, AI5255328, AI541527, AI557238, AI557796, AI541415, AI541390, AI540974, C15406, AI525856, AI044162, AI041086, AI043496, AI041296, AI041233, AI043444, AI044529, AI044125, C14391, AA585325, AI541017, AI040193, AJ239433, AI541533, T41329, AI546829, AI041324, AI043538, AI040621, AI041347, AI041098, AI041163, AI041277, AI041358, AI041096, AI047012, AI040464, AI041346, AI040155, AI041197, AI043612, AI557602, AI039915, AI040463, AI047219, AI041227, AI047057, AI047170, AI040119, AI047036, AI041292, AI041051, AI047183, AI040322, AI041131, AI046330, AI041278, AI041133, AI041159, AI041238, AI041142, AI045817, AI040625, AI040510, AI043467, AI044186, AI044037, AI040091, AI040128, AI040168, AI040255, AI040285, AI040342, AI557533, AI040332, AI040617, AI045684, AI540882, AI040745, AI040370, AI043677, AI040529, AI046442, AI040839, AI041752, AI041168, AI043775, AI044165, AI043492, AI041602, AI045920, AI037436, AI038838, AI044074, AI041635, AI045990, AI040458, AI044199, AI044187, AI557279, AI040090, AI040263, AI040294, AI040329, AI040082, AI044272, AI040444, AI041186, AI040148, AI041730, AI041523, AI043627, AI079878, AI046392, AI041374, AI040052, AI043845, AI039338, AI042135, AI044064, AI038983, AI039316, AI043923, AI043814, AI043848, AI037435, AI041459, AI043570, AI041577, AI044201, AI044258, AI046850, AI038532, AI040768, AI037727, AI046994, AI040414, AI040571, AI046914, AI142134, AI043537, AI546831, AI041140, T23985, D59436, AI557408, AI045725, AI040238, AA585378, AI039744, AA585434, AI040253, AI557864, AI541356, AR062871, A25909, AR038855, Y09813, A85395, A85476, AR037157, AJ244005, Y16359, D50010, AF082186, AJ244004, AR062872, AR062873, D78345, U94592, A20702, AR017907, A20700, AJ244003, A43189, A43188, AR038762, AJ244007, Z32836, A70872, A70869, A98420, A98423, A98432, A98436, A98417, A98427, A98767, A93963, A93964, I63120, I44681, X83865, A84772, D13509, A84776, A84773, A84775, X81969, A84774, AR054109, AR067731, AR067732, A86792, A58522, A91750, AR008429, I13349, A60212, A60209, A60210, A60211, I18895, I05558, A18053, AB025273, I08396, I08389, I84554, I15717, I15718, E03627, I48927, A90655, D13316, A02712, A77094, A77095, A81878, A95051, I06859, A18050, A23334, A75888, I70384, A64973, A60111, A23633, AR007512, AR031566, A35537, A02135, A02136, A04663, A04664, AR038066, I00682, A11623, A11624, E00609, E13740, A11178, E01007, A10361, AR043601, M28262, A11245, I03331, A02710, E12615, AR035193, A92133, E14304, A07700, A13392, A13393, I62368, AR031488, I13521, I52048, A27396, AR027100, I49890, I44531, I28266, I21869, A91965, I44516, A70040, E16678, A82653, E16636, A93016, AF149828, A24783, A24782, A95117, A58524, A58523, I08395, AC005913, I19525, I01995, I25027, I26929, I44515, I26928, I26930, I26927, I08051, I60241, I60242, AR051957, A20699, E00696, E00697, E03813, I66482, AR009151, I66485, I66483,					
---	--	--	--	--	--

						I66484, I66498, I66497, I66496, AR027099, I66486, I66487, A22738, AR051652, AR051651, X07299, AR064707, AJ230935, E17098, I66495, I66494, AJ230972, A22734, AJ231028, AR022273, AJ230902, AR054723, X55486, AJ231009, AJ230845, AJ230867, AJ230951, AR051864, I36244, A06631, S60422, X82786, AR051865, E12584, AR063812, Y14219, AR035975, AJ231011, AR035977, AF006072, X76012, I05845, AR031358, AR031365, AJ244006, AJ230996, AJ243486, I03669, I03668, A16035, AR003381, I33632, AR017826, I18302, AR035974, AR035976, AR035978, E03654, A24548, A24546, AF213384, AF147331, M11147, X03743, A62298, AR050070, A82595, A82593, X82834, M10119, A22739, A05993, and A05991.
HETIG71	249	974359	1 - 397	15 - 411		
HETIU84	250	766589	1 - 386	15 - 400		AA359333, H80204, T81361, W39405, W26521, AL037788, AI340563, AA831054, AI942228, AW025654, AI656682, AI867892, AI392798, H78428, AI431922, AI935355, N74643, AA470851, AI984946, AA136269, H58033, R24652, W25612, N88059, and AF161432.
HETIU85	251	883991	1 - 270	15 - 284		AA336474, AA336555, AA634465, AI963222, AI674747, and AA337527.
HETIU89	252	764951	1 - 367	15 - 381		AA732024.
HETIU60	253	739804	1 - 632	15 - 646		
HETIU84	254	935947	1 - 152	15 - 166		
HETJD30	255	974558	1 - 651	15 - 665		AW410053.
HETJD86	256	909130	1 - 637	15 - 651		
						AA283174, AA813107, N85059, AI829548, H66598, H47422, AI025850, AW193437, AL049869, AB023214, AC004230, AL133163, AL024498, AC006006, AC005393, AL031722, AC009516, AP000557, AC004463, AC002316, AL030995, AC004799, AC004876, AC005696, Z93023, and AC005015.
HETJG63	257	950017	1 - 480	15 - 494		
HETJ32	258	806435	1 - 600	15 - 614		R02503, AA873257, AI791771, AL021997, and AC005678.
HETJK67	259	751072	1 - 491	15 - 505		
HETJN51	260	767932	1 - 544	15 - 558		
HETJT95	261	789310	1 - 401	15 - 415		AA528140, AI375677, AW237773, AI624970, AI420574, AI244780, and AI624952.
HETJX04	262	927120	1 - 848	15 - 862		AA853282, AA370481, AA625156, AB025258, and AB025259.
HETJY11	263	966194	1 - 603	15 - 617		AA356376, AI354409, AA610255, AA577824, AA158549, AL120004, AW265688, AI583532, AW265276, AI049630, AA701122, AI801505, AI283938, AI243793, AW403829, AA491423, AI417469, W96277, AI565084, AI358776, AA626840, AA558404, AA502110, AW089625, AI133514, AI733856, T47138, AW268329, AW275432, AA551067, AI049845, AI421257, AA834816, AI061303, AI687972, AA297789, F31811, R70883, AL041375, AI912401, AA133293, AI090334, AI538404, AI336771, AA632556, AW069227, AA176605, AA612727, AA102737, AI252726, H95865, AI623364, AA484022, AI255083, AI634187, AW008184, H29914, AA599532, AI369076, AA525331, AA582746, AL040430, H67064, AI671077,

					<p>             AW068580, AA020873, AW243945, AA515924, AI355246, AA557945, AA513851, AI473995,              AA493789, AA581471, AA485343, AA609826, AA846923, AA018923, AW167202,              AW341955, AA608675, AA630854, AI567391, H43771, AI054030, AA376358, AW238341,              AW237905, AI932871, AI457313, AA218684, D44672, AW129188, AA084320, AI474127,              AA44166, AI431513, T15767, AW341978, AI469564, AA610433, AI520925, H01243,              AA831426, AI309943, AA491767, AA302982, AI049701, AW270385, AA182731, AA551035,              F35674, AA910941, AI720403, AI570237, AI610468, H61742, N33587, AI358928, AA489856,              AI073373, F00533, AA857812, AI125143, AW236219, AA501782, AI282724, AA666295,              AI869797, AI246386, AI816058, AC005015, AC002350, AC005839, AC002470, AC006512,              AF001550, AI133246, AI009031, AC002326, AC007225, AF064861, AC003041, AI049766,              AC002126, AC005874, AF134471, AC006277, AI109628, AC006312, Z99943, AC005089,              AC005736, AC006160, AC003037, AC009044, AP000501, AF205588, AC008372, AC005067,              AC004526, Z84487, AC006050, AC005920, AC007057, AP000252, AI132712, AP000212,              AP000134, AP000704, AF047825, AI031584, AC006449, AC005779, Z83846, AI022163,              AC006059, AC002351, AC003104, AI050318, AC004531, AI117352, L14561, AC005531,              Z95331, Z98050, AC005529, AC002128, AI135744, AC004230, AC007488, AC005722,              AI034549, AC007546, AC006501, AC004983, AC007878, AI049829, AC000004, AC006459,              AC004755, AC006285, AC009509, AC005527, AC006130, AI035587, AC006480, AI031729,              U91323, AC004686, AC005765, AC004106, AC006084, AC007226, AC004820, AC004491,              AC004019, AI031003, AC004865, AI034420, AC002045, L44140, AI031228, AI109758,              AC006380, AF111170, AI031311, AP001053, AC006529, AC007193, AC006581, AC003689,              U95090, AC004895, AC005081, AI031258, AC008040, AC003071, AP000321, AI035684,              AC006023, AC004985, AI078463, AI034417, AC006211, AC006071, AI021920, AC007308,              AC006252, AC004813, AI096712, AI096701, Z99128, Z83844, AC006946, AC005593,              AC006165, AC005300, AI031005, AC005197, AC016025, AI132987, AC007114, AC007899,              AB023051, AC007050, AC000082, AC003982, AC005914, AC007695, AI031685, AP000121,              AP000167, AP000052, AC004125, AC020663, AI121825, AC006571, AP000952, AI133245,              AF067844, AC003963, AP000512, AI031597, AC005829, AI049760, AC005696, AF196779,              AC005006, AF207550, AF157816, AC016027, AC004448, AC004408, AC006064, AC005803,              AC005523, AC007637, AC016830, AC002404, AC006121, AC004000, AI035079, AC006966,              AC005057, AI034582, AC007277, AC005755, AC008149, AI031681, AI009181, AI049776,              AI023879, AC004596, AC002312, AC005071, Z98946, Z95115, AF134726, AI096791,              AC002425, AC005086, AC004955, AF001549, AI121603, AI117337, AI021453, Z68870,              AI080243, AC004973, AI117258, Z97989, L78810, AC005900, AC004695, AI117694,              AC007151, AP000689, AI023807, Z98941, AI109798, AI022476, AP000152, Z82206,              AB020868, AI049839, AC007279, AC005037, AC007686, AC004771, AI003147, AC004878,           </p>
--	--	--	--	--	--

						AC004933, AI020997, Z95116, AI035423, AC006132, Y18000, AC004655, AP000356, AC002476, AF165926, AC005972, AC003108, AF053356, AJ246003, AC004967, AI049712, AC007684, AP000115, AC007649, AC003962, AC003950, AP000694, AI031588, AC005377, AI049636, AC005004, AC002991, and AA910844.
HETKA38	264	894600	1 - 649		15 - 663	AI799104, AA972394, and R07977.
HETKG67	265	974355	1 - 718		15 - 732	AW084172.
HETKH01	266	915320	1 - 302		15 - 316	
HETKH92	267	790910	1 - 198		15 - 212	AR062277.
HETKM55	268	974362	1 - 730		15 - 744	
HETKQ65	269	855449	1 - 474		15 - 488	AA336548, AJ251025, AC002098, and AJ251029.
HETKV26	270	910030	1 - 680		15 - 694	AC003665.
HETKX91	271	789797	1 - 307		15 - 321	
HETKZ65	272	941045	1 - 608		15 - 622	AA312013, and AF067972.
HETLB04	273	920894	1 - 1373		15 - 1387	AA702803, AI803643, AI566865, AA766437, AW005007, AA043795, AA683129, AI817677, AA512883, AA505838, AA631295, AA808400, AA599331, AI826399, AA767812, AA808767, AW385923, AI016110, AA570116, AA437055, AA471293, AA394009, AA442492, W16809, AA306378, AA287514, AW327292, W20041, T81379, W16892, W16816, W76580, AI086244, AA022944, N39663, N39773, N28024, AA355038, N40080, T24737, AA333960, AA337096, AA336844, AI061614, AA092603, H69650, N95146, W16976, AA431265, and AW298810.
HETLH89	274	786458	1 - 249		15 - 263	AA463820.
HETLM46	275	974361	1 - 429		15 - 443	AC006478.
HJMAE34	276	957079	1 - 292		15 - 306	
HJMAZ84	277	919847	1 - 398		15 - 412	AA002128, D80614, AI936856, AA454962, W45609, W25476, H79084, AA253291, D81240, D81550, AI310465, AA454963, AW187987, H77419, AA443024, D61329, AA878315, H93507, D61227, H77765, AI991959, AI571297, N66618, N93599, AA926681, AA861197, AW341582, AI130710, AI089399, AA565959, AA428582, AA855002, AI052480, AA463465, AA502363, AA926699, H93719, AA226686, H79085, AI167771, AI084567, AA594578, AA548424, AW263196, AI123575, AI806033, AI185582, H26225, AA977298, AA904619, AA913056, AA830635, AA809388, AI418325, AA954613, AA428581, and AF151109.
HJMBT23	278	858254	1 - 657		15 - 671	W68790, AI553754, AA741320, AI791865, H20412, AA865287, AI340302, AI681259, AW450355, AI215794, AI767774, AI991972, AI807751, AA378382, AI369759, R43803, AW451952, AA642194, W68697, and AA243542.
HLMNG77	279	675752	1 - 238		15 - 252	AW170054, AI198826, AW104425, AI269001, AI188129, AI217517, AI695935, AA758120, AI016865, AW104993, AB011129, and AC020663.
HLWAB50	280	856552	1 - 353		15 - 367	
HLWAD08	281	958554	1 - 282		15 - 296	T23963.

HLWAG51	282	964389	1 - 1712	15 - 1726	AI742201, AA702146, N41421, N42024, R53820, AI040758, AI022068, N29636, R74596, AA678080, AI743349, N92675, R56690, AA034028, AI471941, AI241444, AA331067, R81024, H54160, H59318, AI184751, AA779352, N41642, R22378, H66306, H13492, N30300, N26409, R27135, H00724, R74487, T86855, R56846, N73527, AA461540, R32619, R53865, R78495, AA367506, W90130, R27290, R21881, C17564, N63764, W90088, AI220639, H67730, H54003, R25201, C18787, R32507, R23955, H00639, R80819, AI248028, AA367507, H59271, AA368366, R23956, H13441, AA938123, and AW390834.
HLWAH41	283	944774	1 - 946	15 - 960	R98276, T95945, W33061, AW392670, AW384394, AW363220, U46351, AL119457, AL119324, AW372827, Z99396, AL119497, AL119319, AL119341, AL119443, U46341, AL119355, AL119484, AL119363, AL119391, U46350, U46347, U46349, AL119444, AL119483, AL119396, U46346, AL119335, AL119418, AL134902, AL119522, AL119439, AL119401, AL134528, AL042450, AL119399, AL037205, AL119496, AL134533, U46345, AL134536, AL042614, AL134525, AL134538, AL043019, AL042965, AL042975, AL042544, AL042896, AL043033, AL042984, AL042970, AL042542, AL043029, AL042551, AL043003, AL119464, AL119488, AC000047, AB026436, AR054110, A81671, AR066494, AR060234, and AR069079.
HLWAI13	284	920690	1 - 869	15 - 883	AI032745, AA024482, AA922863, AI701944, AI150858, AI270332, AI151319, AA858133, AW135972, AI093066, W38159, AI247539, H04083, AA641624, H02150, H01456, AA382448, H04750, T49622, AI219287, W02674, AA676625, AI961431, H02149, N27194, AA595296, AA004543, H01225, T58656, AA649738, H01013, AA641643, AA897262, H03388, R63061, AW386273, AA909471, AW389613, R71626, R71240, AI634930, R25176, R79411, AW389614, R79410, R76109, AI202312, AI866010, R24676, W57657, W25628, N39940, AA393303, AC004231, and AL117538.
HLWAJ64	285	746460	1 - 367	15 - 381	AA654781, AA526630, AA478355, AL037771, AI630176, AW275498, AI470646, AI124610, AA846952, AW410354, AI042311, AA837087, AI174766, H23653, C18993, AW089101, AL036037, AL119691, AA493695, AW238121, AI049508, H18354, AL135357, AA523841, AI343233, AI560085, AW080811, AA302973, AA292178, AL039145, AA630672, AA063173, AA704393, AW168520, AI933579, AL037383, AI783581, AA809546, F00107, AA468131, AI366993, AW021735, AA507824, AW303008, AA904274, AA679936, AW168420, AA613789, AA279421, AA640410, AA640430, AI345157, AA303007, AI963720, AW150476, N72663, AW166808, AI246796, AW268973, AI612142, N41888, AA483256, AL043719, AI864813, AI732120, AA174016, AW440545, AI174017, AI818737, AI687343, AA548058, AL121871, AF196779, AL034379, AC006552, AF114156, AC004999, AC006241, AC005412, L44140, AC006001, AC004000, AL033392, AL031283, AJ229042, AL022320, AC006316, AC004707, AC003046, J02846, AC004156, M16553, U80017, AF000114, AF130343, AC005877, AP000466, AP000952, AC004887, AL031311, AC002418, AL096702, AC006509,

					AC006111, AC006511, AP000503, AP000151, AC005031, AP000013, AP000010, Z69719, AL031432, Z82173, AC005701, AL078477, AL035458, AL031123, AC005089, AC004963, AC007666, AL049569, AF134726, AC004985, AC004386, AC006115, AL034417, AC002117, AC007151, AC004087, AL022313, D87675, AC004019, AC000052, AF031076, AL023807, AC002310, AC004098, AC003043, AI239322, AC006203, AC004983, AC006014, AL008729, AC004922, AF050154, AC003684, AL135744, AC004417, AC005703, AL031594, U95739, AC006468, AC005519, Z83846, AL049643, Y07848, AL133399, Z82214, AC007630, AC002522, AC006960, AP000155, AC007917, AC005300, AC005207, AL021546, AC007066, AC005156, Z54334, AL034420, AL050318, AC005231, AL035413, Z84469, AC005242, AC004819, AC005803, AL096843, AL050325, AC007551, AL049776, AC005488, AL109758, AC007971, AC005815, Z94044, AC004832, Z68321, AC007237, Z94056, AC005067, AC005602, M89651, Z97630, AB023049, AC004253, AF030876, AC005940, AL035072, AC002390, AC007686, AF064861, AC003083, AF030453, U40369, AC002377, Z99716, AL049867, AL022721, AC007676, Z98752, AC002540, AF176815, AC006965, AL031427, AC008394, AC000120, I05724, AC006211, AL109984, AC006985, AC003109, AC005261, AC005307, AC002352, AC005088, AC006571, AL031257, AC005808, AC009516, AC006064, AP000557, D00596, AC006265, AC006515, U47924, AF047825, AL121655, AC005498, AC004217, AL022239, D83989, AC005914, AL035461, AC006261, AC004144, AC005180, AC009247, Z98051, AC005484, AL022326, AC008044, AC005725, AF207550, Z98884, AP000350, X54181, AC004142, AL008718, AL033543, AL031259, AC004241, Z49918, AF024533, AL035450, AC010168, AC004968, AC006368, AC007055, Z82178, AC007298, AL122020, AB000877, Z94721, AP000553, AL022238, U96629, AC002400, AC003982, AC005785, AC002528, AL049766, AC003972, AC009509, AC008119, AC005520, AC007312, AC006125, AC007292, AC007848, AC007136, AC007226, and AL035462.
HLWAK69	286	694216	1 - 551	15 - 565	H69568, and AL022393.
HLWAK94	287	715727	1 - 394	15 - 408	R80441, R53837, AA367782, AA713884, AA713743, and AB033064.
HLWAR77	288	947484	1 - 1275	15 - 1289	AA449919, AA449920, and AF119815.
HLWAR78	289	723330	1 - 495	15 - 509	AA367499, and AI138461.
HLWAU18	290	666273	1 - 439	15 - 453	H68343, AI915081, H40478, AA586433, AA326452, AA808631, AA650447, AW265688, AA837771, F17700, N89894, AI567391, AA523293, H63660, AW264393, W18189, AA533408, AA715955, AA582746, AA507993, AA339923, AA904211, AA452569, AL134167, AA937809, F31867, F33037, AI791185, AA745524, AA947369, AI243793, AA878407, AA021139, R93854, AI185394, F30310, AI801563, AI565084, AI923052, AI580707, W78056, AA297006, AA228778, AA526424, AA936718, AI198718, AA347927, AW151541, AA297496, AW366361, AI270647, AA668587, AI370475, AW082076, R70883, AI858889, AI821273, F09355, R70884, AA947375, AI697242, AA658934, AA365744, AI521525, AW002831, AA558366, AC003982.

HLWBA11	291	966796	1 - 338	15 - 352	AC016025, AC005180, AC006285, AL009181, AC002310, AC005519, AC005516, AC005746, AC004797, Z82194, AL050348, AL050307, AC002128, AC004623, U52111, AF067844, AL080242, AP000553, AC009516, AF161800, AC005037, Z82215, AL133353, AL021977, AL008723, AL031577, Z82172, AC006160, AL024498, AL049538, AC020663, AL096757, AL135922, AL023553, AC006356, AP000496, Z98200, AC000134, AC007536, AC006205, AC007324, AC004453, Z96811, AC003002, AF104670, AC003664, AC006466, AC005231, AC004594, AL035400, AC005182, Z82245, AP000533, AC005841, AC007688, AL031595, AL031643, AC005899, AL078463, AC005520, AL035443, AC005383, AF111170, AL033375, AL110503, AL132800, X87344, AF001549, AC005914, AL050318, AC006449, AL022316, AB012113, AP001056, AF108083, AC007393, AL035659, AC003976, AL032821, AC005486, AC009181, AL021368, AC008040, Z97183, AC006965, AC004887, Z95115, AL109758, AC005944, AR020909, L76927, AC002120, AC002347, AC007681, AC005881, AL031657, Z69921, I34294, AC004983, AC004961, AL034553, AC005064, AC004020, AP000552, AC005291, AC002991, AC002492, AL022326, AP001138, AC005484, U91325, AC005702, AL021395, AC007225, AC000353, U95742, AL133448, AL008720, AL022322, AC006486, AC005277, AC005244, AC004832, AL033397, AC016027, AC016830, AL135960, AJ131016, AC002044, AL132712, AC005071, AC007216, AC006035, AL049696, AC005962, AC006166, AL049760, AP001054, AC002477, AC004631, Z97184, AF031078, AF030876, AL031311, AL133371, AC005049, AC006529, AC007292, AC008989, AC006473, AP000695, AC005193, AL122021, AC005378, AL049697, AP000696, AC008012, AL022721, AC002364, L25272, U02052, D79983, AL049713, AC004653, AL035682, AC005255, AC002364, AC006344, AL021528, AL034400, AL031667, AL021578, AC007263, AC007919, AC005940, AC005527, AC005768, Z84496, AL024493, AL050332, AC003688, AL049634, AL096712, AC007395, AC005179, AB023051, AL035071, Z93930, AL008632, AC004073, AC004622, AL035460, U91318, AP000501, AC005683, AC004056, AC006064, AC005736, AC002543, AL096701, AC004528, AL035462, AC006388, AC008150, AL096704, AP000152, AP000011, AL035423, AC005878, AL117344, AC005220, AC007663, AF111168, AP000300, AL049869, AF038458, AC007695, Z98048, AF217403, AL031845, AC004030, AL031300, Z75407, AD000684, AL110114, AC004854, AP000495, AC005476, AL031276, Z98742, and AL021939.
HLWBA25	292	677944	1 - 440	15 - 454	N47928, D78769, AA002046, A1655391, and C16888.
HLWBE31	293	934562	1 - 329	15 - 343	
HLWBE92	294	791362	1 - 505	15 - 519	AA368122.
HLWBJ02	295	919639	1 - 371	15 - 385	AL133404.
HLWBK40	296	711000	1 - 432	15 - 446	
HLWBN49	297	713600	1 - 1086	15 - 1100	R27276, R83085, N79154, R67710, H67488, R66311, H54211, H80349, R27267, H66895,

HLWBO68	298	529323	1 - 221	15 - 235	H87378, N99360, W03263, N62439, N69438, N71427, and AC005281.
HLWBQ84	299	782938	1 - 251	15 - 265	N52311.
HLWBQ86	300	703465	1 - 475	15 - 489	AA947352, AA493245, AI307563, R00693, AI358505, AA629668, AA772493, AA557945, AA640305, AA152398, T47075, AA633804, AI344906, AI754257, AI523356, AA584360, H81012, AI620666, AI459879, AI318548, AI885896, AI567676, R79396, T52366, AI114755, AA155817, AA156183, AA349923, AA636077, F35374, AI631299, AA643768, AA524604, AI300507, AW157128, AI969090, W03800, AI803824, AW080118, AW407679, AA601290, AA573564, AW277240, AA369465, AI309059, AI251024, AI828721, AA569220, AA995445, R26871, AW021674, AA015948, AI572680, AW149241, R87909, AI147511, R88475, AI925588, M77964, AI860648, AA447247, AI174701, AW273201, AW273146, AA804975, AW192002, AA522864, AA809104, AI821945, F00937, H53109, AA639209, AA486896, AA526542, R91138, T57516, AA021061, AI002950, AA503932, AW008217, AA604601, AA579082, R86876, AW366198, AA669458, AA351868, AA629533, T57562, W69639, AL022097, AL031594, AC006315, AC016027, AP000692, AC005932, AC003102, AC007298, AC016830, Z97630, AC005255, Z69650, AL022323, U80017, AC005844, AF207550, AL031311, AC004447, AC007227, AC007707, AC005031, AL008734, AC004999, AC007690, AL121603, AL132994, AC006120, AC005516, Z97632, AL133355, AC006162, AL035458, AL031427, AC007381, AC000003, AL031229, Z74696, AC005664, AC005206, AP000275, AC005355, AC005251, AC005667, AC002491, AC004913, AP000037, AP000105, AP000469, AL031657, Z98950, AC005993, AC002395, AP000356, AL049759, AC007263, AC006948, AC006538, AC004856, AL121652, AC004477, AC004835, AJ003147, AC002465, AP000694, AC004997, AC005703, AB001523, AC005581, AL121580, AP000509, AC005585, AC000084, AF111169, AC005821, AC005663, AL049562, AL022165, AL096712, AL021877, AC005231, AB023051, AL049761, AC004991, AL034420, AL031177, AC005589, AC004257, AC005180, AC004953, AL031291, AC006512, AL021393, AL080243, AL122020, AC004805, AL022726, AC007022, AB020873, AL139054, U51280, AC007243, AC005331, AC005305, AC006048, AC007283, AC006057, AP000099, AL008716, AC004150, AL031680, AC005913, AC004876, AC001551, AC004806, AC007361, Z83826, AL035079, AC004914, AC007877, AC004458, AC005632, AC006312, AC005914, AL049776, Z84718, AC007637, AC005209, AP000512, AJ251973, AC002369, AC004254, AC005519, AC008115, AP000036, AC000070, AC003999, AC005602, AL035460, AF006501, AL031674, AP000351, AL031186, AC002477, AL096701, AL049709, AL031284, AC006236, AC007390, AL020997, AL110502, AL024498, Z84469, AC004859, AL035455, AC007564, AC006079, AC004832, AC005822, AL121595, AL022067, AC007314, AL096791, AC005746, AC005041, AF107885, AC004801, AL135744, AL049780, AC007055, AC002524, AC005049, AF109907, AL031721, L47334, AC010205, AF015262,



						AC004076, AC004560, AL133448, AL022315, AF205588, D34619, AC004921, AJ229043, AL021395, Z98742, AC016025, AL132826, AC003957, AC008171, AL031670, AC002079, U73479, AC000075, AP000260, U95739, AL035209, Z82201, AC006547, Z81450, AC002302, AC004652, AP000503, AC004659, AC006013, AC007050, Z82198, AC005060, AC004500, AC005755, AL096757, AJ133269, AC006511, AC009405, AF111168, AC005318, AC004032, AL021391, AL049777, AC005837, AL031985, AC005759, AC004854, U89337, AP000030, AL021155, AL031587, Z83846, AC006390, AL031058, AC002364, AL031767, AL022326, Z97056, AC006597, AC005856, AL022313, AC004000, AL022302, AL132992, AC004099, AC004796, AL022336, AC004695, and U91326.
HLWBS14	301	925300	1 - 271	15 - 285		
HLWBS43	302	774175	1 - 448	15 - 462		
HLWBZ74	303	679215	1 - 532	15 - 546		H12696, AA367915, and AC005281.
HLWCA67	304	577929	1 - 886	15 - 900		W81241, H12868, H60705, AW393433, R73306, R65857, AI091425, AI808222, AI149187, AA994537, AA700322, AC000115, Z97632, and AF137387.
HLWCM44	305	727699	1 - 310	15 - 324		AL121578.
HLWCM70	306	926850	1 - 343	15 - 357		W31589, AI829352, AI982989, R45778, AI346428, AA031570, AA602550, AA455757, AI342486, AA031571, AI394271, AI754665, N51169, AI908523, N50210, and AC005832.
HLWCO66	307	750779	1 - 519	15 - 533		
HLWCQ53	308	869700	1 - 632	15 - 646		R24069, AI148527, AA513449, AI809692, AW452872, AA954445, AA812573, H57889, AW183378, AI619978, AA813225, AW197888, and R26598.
HLWCQ62	309	742778	1 - 824	15 - 838		AI024849, AI024871, N47115, and N50324.
HLWCQ76	310	768018	1 - 261	15 - 275		AI828591, AI954470, AI799304, AI814054, AA455520, T91958, AL135108, and D80002.
HLWDA01	311	913768	1 - 530	15 - 544		AB020629.
HLWDB18	312	790969	1 - 688	15 - 702		Z43873, AA502583, W23097, AL048979, AI797390, AI656908, AI194040, and X99253.
HLWDD02	313	953283	1 - 412	15 - 426		
HLWDE60	314	868276	1 - 439	15 - 453		AC007073, U95626, and AC004065.
HLWDL71	315	759843	1 - 38	15 - 52		
HLWEE76	316	973315	1 - 384	15 - 398		
HLWFG82	317	929647	1 - 545	15 - 559		AI802325, AI161267, AI885931, AA219338, AI660388, AW170791, AW410057, and S56581.
HLWFAQ4	318	856488	1 - 703	15 - 717		AB023186.
HMYDU41	319	957804	1 - 600	15 - 614		AW195334.
HNBTP01	320	914428	1 - 943	15 - 957		AI218626, AI076006, AI922744, AI797880, AI872391, AI559566, AW162613, AI565503, AA449042, AI857802, AW248493, AA074070, AA679085, AI922373, W76538, AA581796, AI292006, AW172513, AI609183, AI682939, AA747871, AA449757, AI885613, AW268637, AA928020, AA568598, AI683858, AW073851, N79729, N62781, AI371131, AI367698,

					AI884907, AW191998, AW016535, N93245, AA379280, AA568887, AA649970, AW264577, H20460, AI221886, AW000860, AI275195, R42681, AW162711, AA460372, AI699657, AW304978, AI081779, AI560482, AI279653, AW243790, AI951374, AW183962, AI696251, AI904299, T78554, R43259, AW079129, AA147203, AI499410, AI475009, AA732831, AA375228, AA379846, AA783050, R51077, N47545, AI474934, Z41466, AA160401, AI678630, Z41592, AW079321, N47546, AI252528, R58857, AA971563, AL022238, and AL137499.
HNBTT179	321	965424	1 - 228	15 - 242	F35097, F24745, AW071109, AA528500, AA460268, H48768, AA715075, AA593273, AA715173, AI820526, H73306, AA648957, AA836548, AW439703, AA846482, T47889, AA708194, AA772704, AA302690, AA890060, T54173, N36143, AA058312, H58883, AL117352, AC007011, Z97056, AC002425, AC003982, AL022336, AC002492, AC002070, AC004125, AC005753, AC004963, AL035461, AC005520, Z95152, AL031984, Z95115, Z85996, AL035681, AL035455, AL031284, AC005243, AC007707, AC005233, AC002310, AL035088, AF165926, AL117337, AL034549, AL132712, AC005666, AC002563, AL033538, AC002420, AF205388, Z96753, AL135783, AL031657, AL109628, AC002045, AL049576, AC000015, AL031283, AC004962, AC000026, Z93241, AC006449, AC002059, AC005225, AF129756, AC007057, Z82182, AL034429, L78810, U67809, AC004167, AC009044, AC006064, AC005962, AC006360, AL023807, Z86090, AC007201, AC007880, AC003666, AC007283, AC003070, AC002369, AC004851, AC005519, AC004638, AC006262, AC005081, AC007919, M89651, AC005971, AC004601, AC005940, AL021977, AC005730, AC002452, AC004923, AL050318, AC009509, AC005231, AL080243, AC002390, AC009288, AL031643, AC004832, AC004821, AC005722, AC003681, AL049776, AC002429, AP000552, AL031651, AC006958, Z83846, AC005684, AC005335, AC004882, AC005924, AP000135, Z82205, AC004554, AF196969, AC012085, AC004703, AC011718, AC005102, AC005191, AD001527, and AC007052.
HNBTX52	322	965428	1 - 327	15 - 341	
HNBUM19	323	933672	1 - 469	15 - 483	AI460390, AI141130, AA364420, AA557913, AI185394, AI267884, AI251429, AA639114, AA687542, AI042771, AW264901, AA603264, AI821805, AI821056, AI792092, AA278496, AI446205, AW270768, H72278, AW008074, AI291037, AW277174, N27751, AI436378, H63154, AC005180, AC004895, AL049795, AC002091, AC005562, AC009516, AC005015, AC008044, AF030453, AC007565, AC003663, AL096791, AL049780, AC004985, AC005914, AC003101, AL049776, AL080243, AC006312, AC005081, AF053356, AC007676, AC005229, AC005755, AP000558, AC006571, AL022313, AL031427, AC007686, AC005088, AL133163, AC002477, AB023049, AC005003, AP000552, Z83826, AL079304, AC004386, AC006088, AC006530, Z97054, Z93023, AC004890, AC000353, AC007226, AC005971, AP000704, AL049757, AC002301, U91323, AC008372, AC003982, Z83840, AF207550, AL109628,

					AC005829, AC002350, AL008582, AL135744, AL139054, AC006039, AC004491, AF050154, AC004033, AJ003147, AC005500, AP000557, AL049653, AC002310, AL031680, AC004967, AP000556, AC004019, AC006509, AL049766, AL031311, AC005086, AC006285, AC004662, AC007540, AP000501, AC005037, AC004878, AL024498, AL035079, Z85986, AC005225, AL031587, Z98200, AC004821, Z97056, Y14768, AC006511, AC004841, AF024534, AC008040, AC007283, AC006101, AF047825, AC005921, AL096701, AC007546, Z95331, AC007229, AC004144, AL023553, AC002418, AC003412, AP000505, AC005519, AC007216, AC005071, AC005261, AL034451, AC005332, AC007151, AC002365, AL035072, AL031255, AC005839, AC006468, AP000512, AC006064, AC005484, AL008718, AF111167, AC006111, AC004876, U80017, AL034429, AC005666, AC004526, AF111168, AC006277, AL031659, AP000008, AC002492, AP000692, AC007055, AP000555, AF165926, AC005488, AC006211, AC005746, AL022163, AF196969, AC005295, AF067844, AL022302, AC002115, U29895, AC002996, AF129756, AC005031, AF134726, AP001052, AL023575, AC005940, AL022721, AL022318, AL031005, AC004477, AC005695, AC004854, AC005944, AL049692, AP000553, AC002375, Z82203, Z98742, AC004832, AC005841, AF196779, AL031589, AC007993, AC005300, AC005696, AL078581, AC005049, U82828, Z82976, AC006160, AC005529, AC006251, and AC002126.
HNBUR07	324	951814	1 - 442	15 - 456	AA759267.
HNGAO08	325	958685	1 - 286	15 - 300	AC003101, AC006974, and AC004099.
HNNNA06	326	917723	1 - 1581	15 - 1595	AA779932, AW069784, AW194351, AI202042, AI128373, AI128364, AI143847, AI990994, AI421235, W95217, W78812, AA855140, AA527080, AI151527, W68234, AA441818, AA143612, AI275577, AI278683, AA908252, W68235, AW195552, AA676541, AI219401, AW291524, AI299109, AI192236, AA862317, H01997, H56734, H83578, AA884790, H82711, AA774498, AA633305, H94868, H79699, H84425, R09902, T90526, AA904994, AA441880, H03628, AI219227, H03629, AI080080, R73007, H56655, AI567570, R81684, W94691, R81474, R81669, T83566, R12503, H52108, T83061, AI444952, AA342086, H02094, H84426, N58039, AI658795, W80711, and H79700.
HNNNA09	327	917724	1 - 548	15 - 562	AW069784, AI128373, AI128364, AI202042, AI143847, AI421235, AA779932, AI990994, AA143612, AI151527, AW194351, AA441818, AI275577, AA527080, AI278683, AA908252, W68235, AA855140, AI219401, AA676541, AW195552, AI299109, AI192236, AA862317, H01997, H56734, H82711, AA884790, H94868, AA774498, AA633305, H03629, T90526, AA904994, AI219227, AI567570, AI080080, R12503, R81669, W94691, H52108, AI444952, AA342086, H84426, W78812, N58039, W80711, H84425, R73007, H79700, H03628, and AI658795.
HNNNA77	328	917725	1 - 1103	15 - 1117	AW291524, H83578, AI202042, AA779932, AW069784, AA143612, AI128373, AI128364, AI143847, AA441818, AI219401, AI278683, AA862317, AA884790, AA633305, AA774498,

						AA527080, AI421235, AI275577, W68235, AA908252, AA676541, AI151527, AI299109, AI990994, AW194351, H56734, AI192236, H94868, AW195552, H01997, H82711, AA904994, AA855140, AI219227, H03629, AI080080, R81684, T90526, AI567570, W94691, R81669, W68234, R12503, H52108, T83061, AI444952, AA342086, H56655, W80711, R09902, T83566, H84426, N58039, H79699, W95217, H79700, and W78812.
HNOAS06	329	933730	1 - 738	15 - 752		AW183087, AA437061, AI992344, AI351831, AA423954, AI655434, AA029186, AI421314, AI025154, AA905377, AI189632, AI148753, AI971532, T77225, T77438, T53640, AA889771, AA029185, and N27393.
HNOAX12	330	969363	1 - 777	15 - 791		N59866, N22173, H24646, H27385, AL119324, AL119457, AL042544, AL119399, AL119464, AW392670, AL119443, U46349, AL119418, AL134902, Z99396, AL119444, U46351, AL119391, AL119363, AL042965, AL119319, AL119355, AL119483, AW372827, AW363220, U46350, U46347, AW384394, AL119439, AL119484, AL119497, AL119401, AL134538, AL119341, U46346, AL134536, U46341, AL134525, AL119335, AL037205, U46345, AL043019, AL042450, AL042984, AL042542, AL042614, AL042975, AL043029, AL119304, AL043003, AL042551, AP000473, AR066494, AR060234, AR054110, A81671, and AB026436.
HNOBF57	331	927903	1 - 769	15 - 783		AI672348, AW173697, AL079990, AI565451, AW305215, AA115462, AW081450, AW020072, AA031780, AA115214, AI094153, AI610893, AI088661, AI051834, AA233114, AA115204, AI469307, AI970462, AI620951, AW130820, N69772, AA495921, N34679, AA987696, AA495922, AA115067, AI770044, AI079994, AA150297, AI434100, AW236674, AI039432, AA961227, AI873440, AA938897, AI681115, AA031879, AA603790, AI301357, N44611, AA243692, AA377521, AA910225, AI913596, AI702644, AA961701, AW452143, AI352693, AI381836, AI767254, AI247300, AI050072, AI830541, AI865675, AI493755, AA573940, AA937056, AI266405, AW138034, AA148788, AA653705, R37287, Z41281, AI090946, AI612953, AW103627, AA326653, AI572322, T49708, T49709, N85358, T49717, N84377, D25919, AP000300, AP000113, and AP000045.
HNOCCQ04	332	964933	1 - 686	15 - 700		AI717999, AW404782, AI831040, CI5687, AW410719, AI634938, AI479751, AA723194, AA398997, AA455667, AW410718, AI589849, AA584383, AI130687, AI190201, AI525790, AI460181, W69759, AA456685, AA632185, AA456287, AI298115, R53507, AA644652, D45471, AI368832, AW300844, AI762742, AA976082, AA621626, AI912458, AA781178, AA292406, AA643693, AI814720, AA399628, AI351664, AA989507, AW408212, AA132709, F20423, AA292771, AA765663, AA417936, AA076022, AI282190, AA394242, AA586966, AI351631, AA620713, AA582000, AI708099, R55785, AI039470, AI498903, AA132838, AW406442, AA327225, AA777017, AA564894, AA635420, AI832846, AI203528, AI274498, AA774256, N71139, AA328719, AA418114, AA810589, AA303814, AI832934, T54206, AA084447, AA093329, AA720518, AA552845, D81168, AA304523, AA582959, AA298391, AA838663, AA765473, AA411181, AA187606, AW404897, AA411255, AI814800, AA025235,